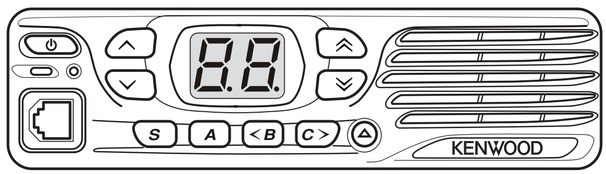
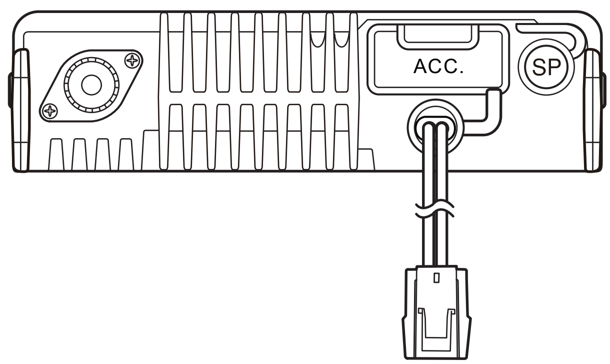
KENWOOD

SERVICE MANUAL

UHF DIGITAL TRANSCEIVER

NX-840H, NX-840H(U), NX-840





Note :
Lead free solder used in the board (material : Sn, Ag, In, Bi, melting point : 227 Centigrade)

TABLE OF CONTENTS

This product complies with the **RoHS** directive for the European market.

This product uses Lead Free solder.

B5B-7127-00

No.RA011<Rev.001>
2014/5

SPECIFICATION

GENERAL		
Frequency Range		450 ~ 520MHz
Number of Channels		Max. 32ch
Number of Zones		2 zones (Max. 16ch per Zone)
Channel Spacing	Analog	12.5kHz
	Digital	6.25kHz
Operating Voltage		13.6V DC ±15%
Operating Temperature Range		-22°F ~ +140°F (-30°C ~ +60°C)
Frequency Stability		±1.0ppm
Antenna Impedance		50Ω
Dimensions (W x H x D) (Projections not included)		160 x 43 x 122.6 mm (6.29 x 1.69 x 4.82 in)
Weight (net)	Radio only	1.10 kg (2.42 lb)
RECEIVER		
Sensitivity	Digital	0.28μV
	Analog (12dB SINAD)	0.28μV
Selectivity	Analog	65dB
Intermodulation Distortion	Analog	65dB
Spurious Response	Analog	75dB
Audio Output (4Ω impedance)		4W with less than 5% distortion
TRANSMITTER		
RF Power Output		5W ~ 45W (NX-840H) 5W ~ 25W (NX-840)
Spurious Response		70dB
FM Hum & Noise	Analog	40dB
Audio Distortion		Less than 5%
Modulation		11K0F3E, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

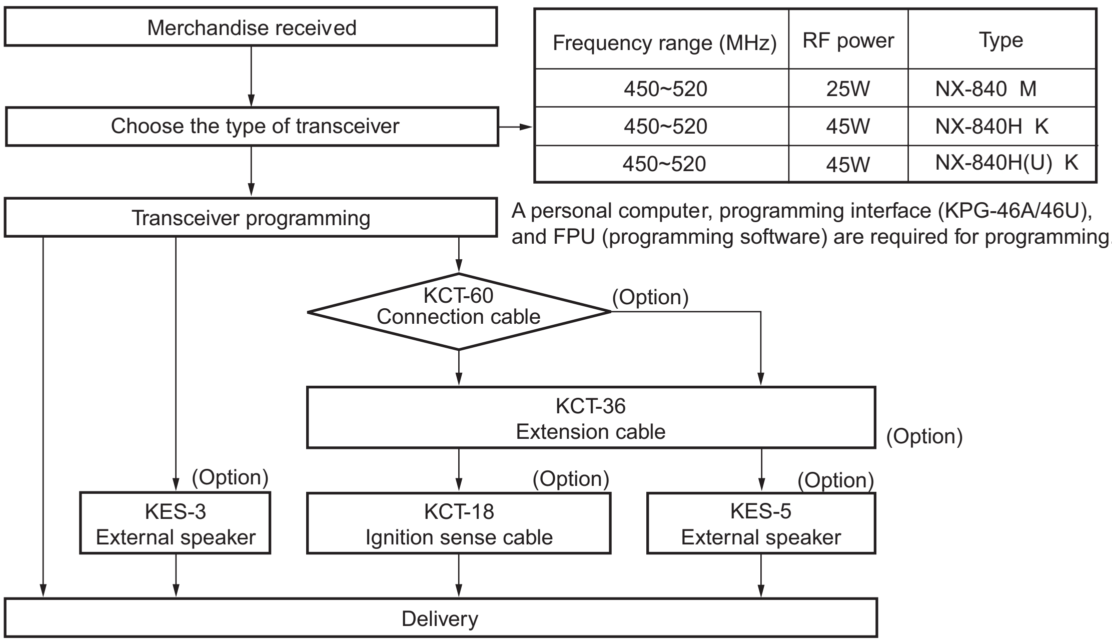
Measurements made per TIA/EIA-603 and specifications shown are typical.
JVC KENWOOD Corporation reserves the right to change specifications without prior notice or obligation.

SECTION 1
PRECAUTION

This service manual does not describe PRECAUTION.

SECTION 2
SPECIFIC SERVICE INSTRUCTIONS

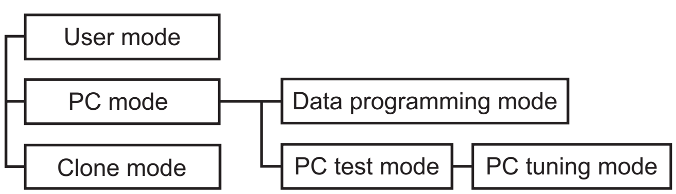
2.1 SYSTEM SET-UP



Frequency range (MHz)	RF power	Type
450~520	25W	NX-840 M
450~520	45W	NX-840H K
450~520	45W	NX-840H(U) K

2.2 REALIGNMENT

2.2.1 Modes



Mode	Function
User mode	For normal use.
PC mode	Used for communication between the transceiver and PC (IBM compatible).
PC programming mode	Used to read and write frequency data and other features to and from the transceiver.
PC test mode	Used to check the transceiver using the PC. This feature is included in the FPU.
PC tuning mode	Used to tune the transceiver using the PC.
Clone mode	Used to transfer programming data from one transceiver to another.

2.2.2 How to Enter Each Mode

Mode	Function
User mode	Power ON
PC mode	Received commands from PC
Clone mode	[⩔] + Power ON (Two seconds)

2.2.3 PC Mode

2.2.3.1 Preface

The transceiver is programmed using a personal computer, a programming interface (KPG-46A/46U) and FPU (programming software).

The programming software can be used with a PC. Figure 1 shows the setup of a PC for programming.

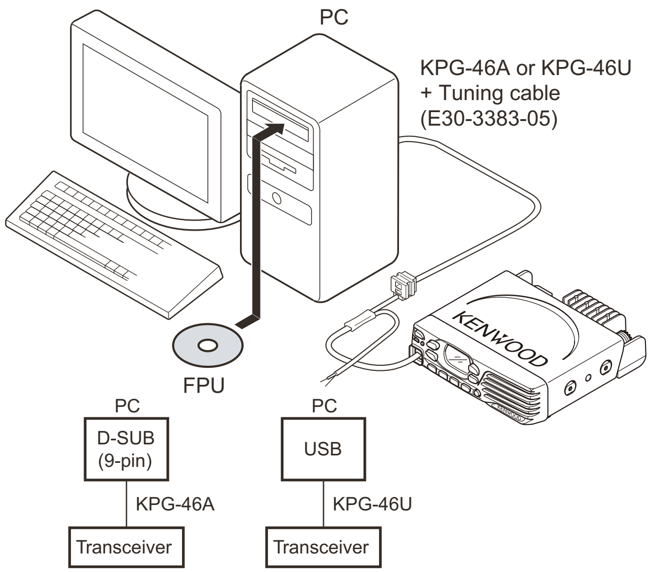


Fig.1

2.2.3.2 Connection procedure

(1) Connect the transceiver to the computer using the interface cable.

Note:

You must install the KPG-46U driver in the computer to use the USB programming interface cable (KPG-46U).

(2) When the Power is switched on, you can immediately enter user mode. When the PC sends a command, the transceiver enters PC mode, and “Pc” is displayed on the LED.
When data is transmitting from the transceiver, the red LED blinks.
When data is receiving by the transceiver, the green LED blinks.

Note:

The data stored in the computer must match the “Model Name” when it is written into the EEPROM.

2.2.3.3 KPG-46A description (PC programming interface cable: Option)

The KPG-46A is required to interface the transceiver to the computer. It has a circuit in its D-sub connector (KPG-46A: 9-pin) case that converts the RS-232C logic level to the TTL level.

The KPG-46A connects the 8-pin microphone connector of the transceiver to the RS-232C serial port of the computer.

2.2.3.4 KPG-46U description (USB programming interface cable: Option)

The KPG-46U is a cable which connects to a USB port on a computer.

When using the KPG-46U, install the supplied CD (with driver software) in the computer. The KPG-46U driver runs under Windows XP, Vista, 7 or 8.

The latest version of the USB driver is available for download from the following URL:

http://www.kenwood.com/usb-com/

(This URL may change without notice.)

2.2.3.5 Programming Software: KPG-175D description

The FPU is the programming software for the transceiver supplied on a CD. This software runs under Windows XP, Vista, 7 or 8 on a PC.

The data can be input to or read from the transceiver and edited on the screen. The programmed or edited data can be printed out. It is also possible to tune the transceiver.

2.2.4 Clone Mode

Programming data can be transferred from one transceiver to another by connecting them via their cloning cable. The operation is as follows (the transmit transceiver is the source and the receive transceiver is a target).

Note:

Clone mode should be enabled.

(1) Turn the source transceiver power ON with the [∨] key held down (2 seconds), “cL” is displayed on the LED.
(2) Power on the target transceiver.
(3) Connect the cloning cable (No. E30-3382-05) to the modular microphone jacks on the source and target.
(4) Press the [S] key on the source transceiver.
The data of the source is sent to the target. While the source is sending data, red LED blinked.
While the target is receiving the data, “Pc” is displayed and green LED blinked. When cloning of data is completed, the source displays “En”, and the source red LED turned off, and the target automatically operates in the User mode. The target can then be operated by the same program as the source.
(5) The other target can be continuously cloned. Carry out the operation in step 2 to 4.

2.2.4.1 Adding the data password.

If the data password is set in the optional feature menu, you must enter the password (Source transceiver) to activate a clone mode.

You can use 0~9 to configure the password. The maximum length of the password is 6 digits.

(1) [∨] + Power ON.
(2) “PS” is displayed on the LED.
(3) If the [∧] and [∨] keys is pressed while “PS” is displayed, numbers (0 to 9) are displayed flashing. When you press the [C>] key, the currently selected number is determined. If you press the [S] key after entering the password in this procedure, “cL” is displayed if the entered password is correct. If the password is incorrect, “PS” is redisplayed.

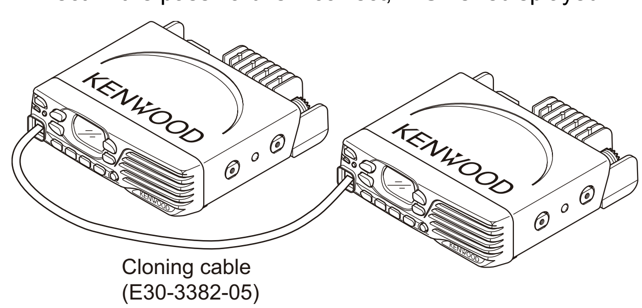
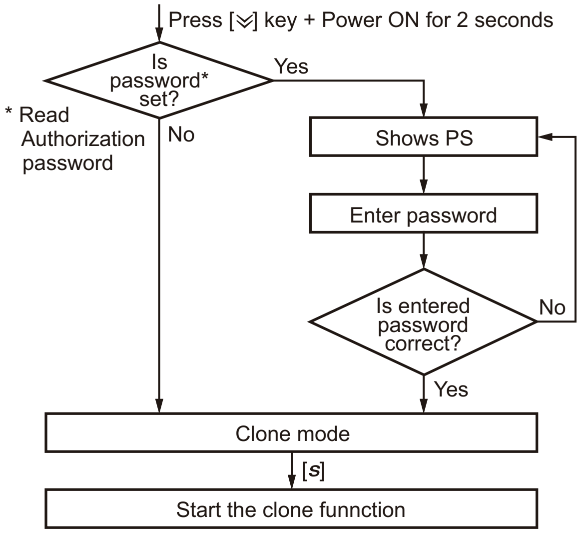


Fig.2

2.2.4.2 Flow chart (Source transceiver)



2.3 INSTALLATION

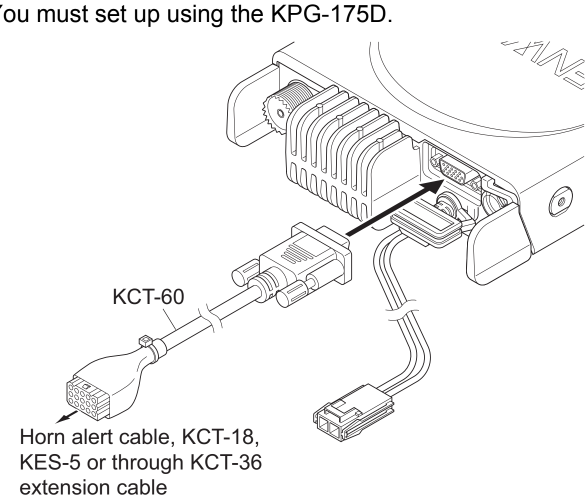
2.3.1 Connection Cable (KCT-60: Option)

The KCT-60 connection cable kit is used to connect the transceiver to a Horn alert cable, KCT-18 (Ignition sense cable), KES-5 (External speaker), or through the KCT-36 extension cable.

2.3.1.1 Installing the KCT-60 (Connection cable) in the transceiver

(1) Remove the ACC. cap on the rear of the transceiver.
(2) Connect the D-sub connector of the KCT-60 to the D-sub 15-pin terminal of the transceiver.
(3) Connect the 15-pin connector of the KCT-60 to a Horn alert cable, KCT-18, KES-5, or through a KCT-36 extension cable.

Note:
You must set up using the KPG-175D.



2.3.1.2 Terminal function

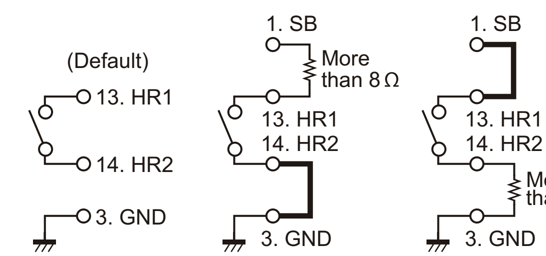
D-sub 15-pin Pin No.	Name	Molex 15-pin Pin No.
1	SB	1
2	IGN	2
3	PA or External SP	12
4	DETO	4
5	DATAI	5
6	FNC1	9
7	FNC2	11
8	FNC3	7
9	FNC4	6
10	FNC5	8
11	FNC6	10
12	5MS	NC
13	HR1	13
14	HR2	14
15	GND	3

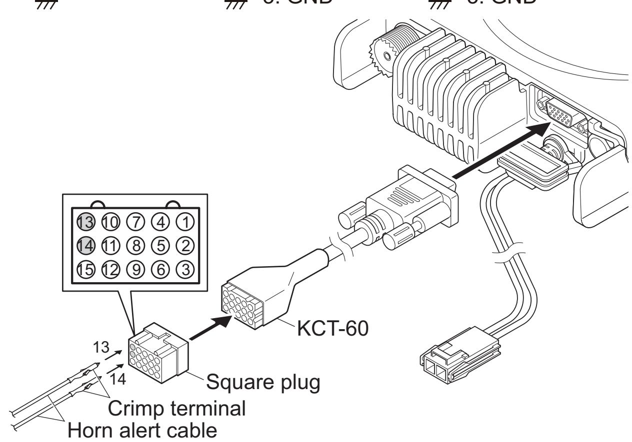
2.3.2 Horn Alert Function

The Horn alert function (max. 2A drive) is enabled by installing the KCT-60 in the transceiver.

2.3.2.1 Installation Procedure

(1) Remove the ACC. cap on the rear of the transceiver.
(2) Connect the D-sub connector of the KCT-60 to the D-sub 15-pin terminal of the transceiver.
(3) Insert the two crimp terminals of the Horn alert cable to pins 13 and 14 of the square plug.
(4) Connect the square plug to the 15-pin connector of the KCT-60.
(5) Connect the remaining two Horn alert cables to your car Horn alert signal control.
The internal FET switch can be controlled by turning the HA function on/off and by using a signaling decode output. The maximum current of HA is 2A. This FET switch is the open drain circuit. Therefore, a DC power supply is necessary to use the HR1. The voltage range is from 5V to 16V.





2.3.3 Ignition Sense Cable (KCT-18: Option)

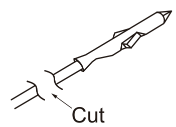
The KCT-18 is an optional cable for enabling the ignition function. The ignition function lets you turn the transceiver power on and off with the car ignition key.

2.3.3.1 Installing the KCT-18 (Ignition sense cable) in the transceiver

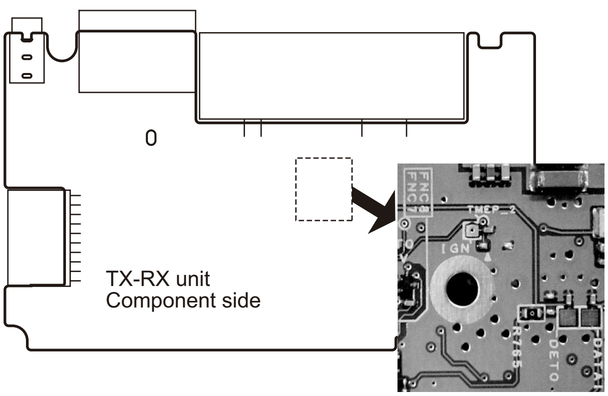
(1) The KCT-18 can be installed in the transceiver by the following two methods (Method A, Method B).
Method A: The KCT-18 is soldered to the “IGN” pad on the TX-RX unit.
Method B: The KCT-18 is connected to the 15-pin connector of the KCT-60 connected to the transceiver.

■Installation Procedure: Method A

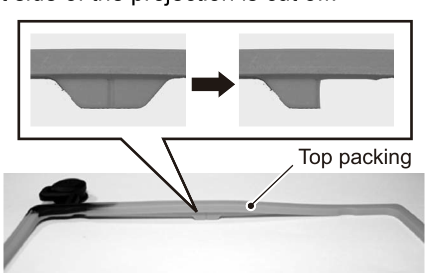
(1) Remove the two screws on both the right and left sides of the transceiver, then remove the cabinet and top packing from the transceiver.
(2) Cut the crimp terminal side of the KCT-18 using a pair of nippers or similar tool.



(3) Solder the cable side cut in the above step 3 to the “IGN” pad on the TX-RX unit.



(4) Dress the KCT-18 cable as shown in the figure. The KCT-18 cable needs to pass through one of two indentations located on the rear panel of the transceiver.
(5) Cut off the projection of the top packing using a pair of nippers or similar tool.
If the KCT-18 cable is dressed to be routed through the indentations on the right side in step 5, the right side of the projection needs to be cut off. If the KCT-18 cable is dressed to be routed through the indentations on the left side, the left side of the projection needs to be cut off.
Following is a figure presenting an example for when the right side of the projection is cut off.

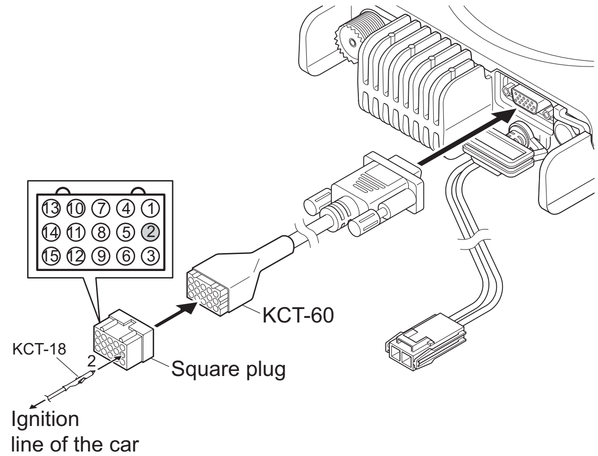


(6) Reinstall the top packing. Check the correct fitting of the top packing, then reinstall the cabinet and two screws for the right and left sides.
(7) Connect the other side of the KCT-18 to the ignition line of the car.

■Installation Procedure: Method B

(1) Remove the ACC. cap on the rear of the transceiver.
(2) Connect the D-sub connector of the KCT-60 to the D-sub 15-pin terminal of the transceiver.
(3) Insert the crimp terminal side of the KCT-18 to pin 2 of the square plug.
(4) Connect the square plug to the 15-pin connector of the KCT-60.
(5) Connect the other side of the KCT-18 to the ignition line of the car.

Note:
You must set up using the KPG-175D.



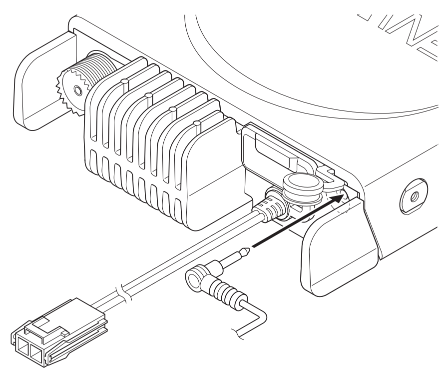
2.3.4 External Speaker (Option)

2.3.4.1 KES-3

The KES-3 is an external speaker for the 3.5-mm-diameter speaker jack.

■Connection procedure

(1) Remove the speaker-jack cap on the rear of the transceiver.
(2) Connect the KES-3 to the 3.5-mm-diameter speaker jack on the rear of the transceiver.



2.3.4.2 KES-5

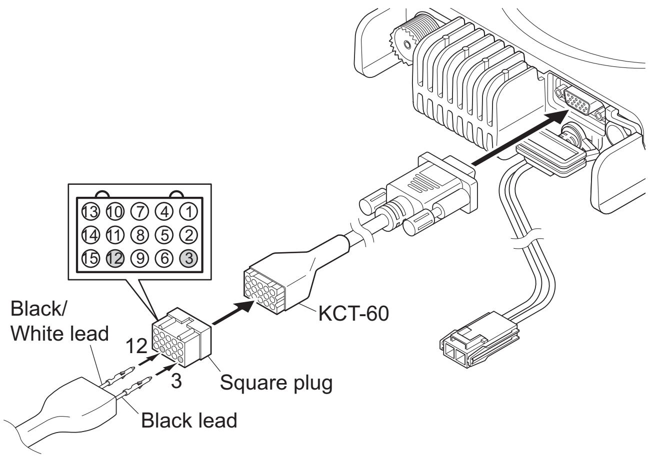
External speaker KES-5 can be installed for KCT-60.

■Connection procedure

(1) Remove the ACC. cap on the rear of the transceiver.
(2) Connect the D-sub connector of the KCT-60 to the D-sub 15-pin terminal of the transceiver.
(3) Insert the two crimp terminals of the KES-5 to pins 3 and 12 of the square plug.
(4) Connect the square plug to the 15-pin connector of the KCT-60.

Note:

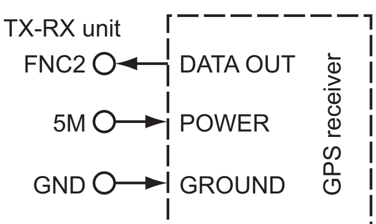
- You must set up using the KPG-175D.
  Before the external speaker can be used, you must assign one of the keys as “External Speaker”, using the KPG-175D.
- This also applicable to public address provide you must assign one of the keys as “Public Address”, using the KPG-175D.

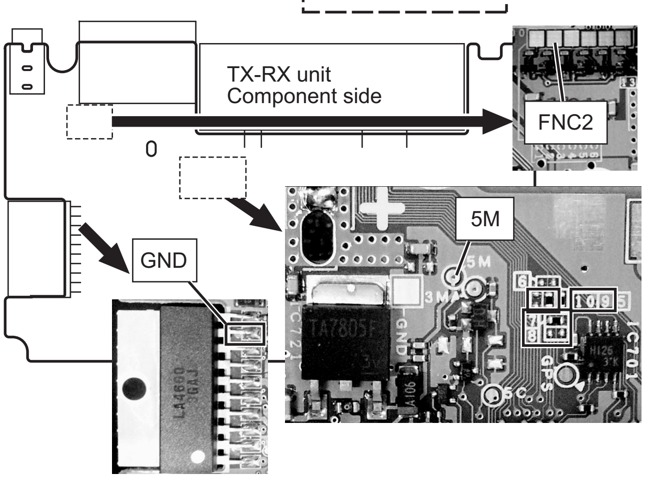


2.3.5 GPS Receiver Connection

2.3.5.1 Connecting the GPS receiver

(1) Soldering position

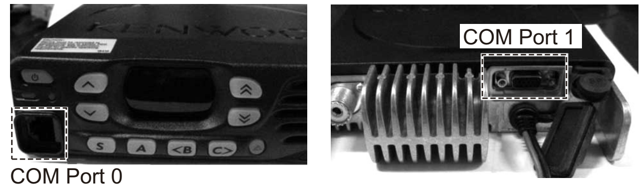




(2) Refer to FNC2 (RXD) of “2.3.7 Changing Serial Port Level”.

2.3.6 Extended Function: COM Port 0 and COM Port 1

Location of COM Port 0 and COM Port 1 of the transceiver is shown below.



You must configure the transceiver COM Port 0 and COM Port 1 using the KPG-175D.
When you set as “Data”, the Function port 1 and 2 will be automatically fixed as Input ports.
The reason for this is because function port 1 (TXD) and 2 (RXD) share the same circuit path of TXD and RXD line.

2.3.7 Changing Serial Port Level

2.3.7.1 Change FNC1 (TXD) and FNC2 (RXD) of D-SUB 15-pin connector from TTL level to RS-232C level

FNC1 (TXD /6pin) and FNC2 (RXD /7pin) of D-SUB 15-pin connector are configured at the TTL level as the default value. But you can change these serial port level to RS-232C level through the RS-232C level converter IC (IC704) by configuring the port.

■FNC1 (TXD)

Remove the R761 chip jumper and solder the clip jumper to R767.

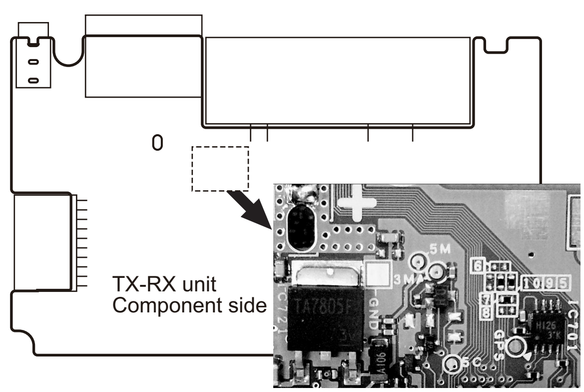
	TTL level	RS-232C level
R761[5] *1	0Ω chip jumper.	open
R767[6] *1	open	0Ω chip jumper.

■FNC2 (RXD)

Remove the R724 and R762 chip jumpers and solder the chip jumpers to R725 and R756.

	TTL level	RS-232C level
R724[7], R762[9] *1	0Ω chip jumper.	open
R725[8], R756[10] *1	open	0Ω chip jumper.

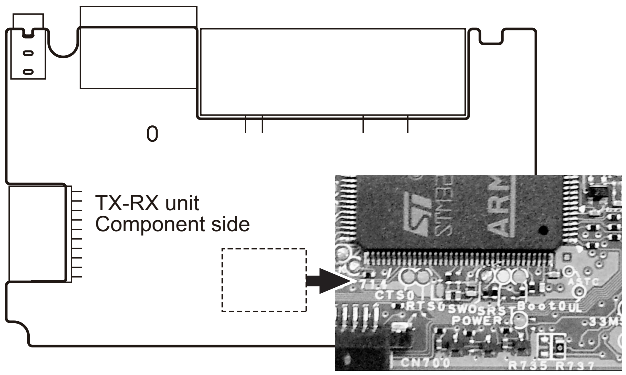
*1: The value in square bracket [ ] is the silk print number on the TX-RX unit.



2.3.8 Changing of Signal Type

2.3.8.1 Change signal input of D-SUB connector from DI to MIC

The input (5pin) of D-SUB 15-pin connector is configured at the DI as the default value.
Remove the R737 chip jumper and solder the chip jumper to R735.



2.3.9 Emergency MIC

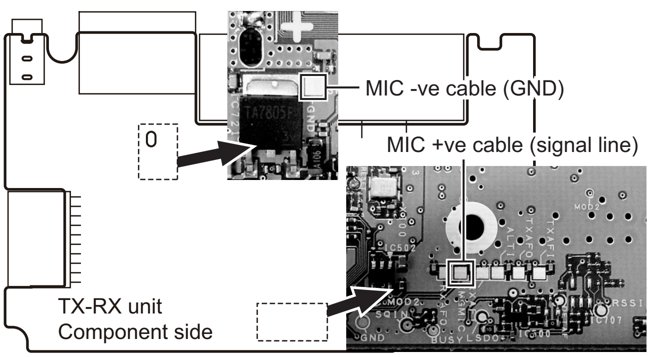
2.3.9.1 Installation Procedure

(1) Remove the two screws on both the right and left sides of the transceiver, then remove the cabinet and top packing from the transceiver.

(2) solder the MIC connection cable as below

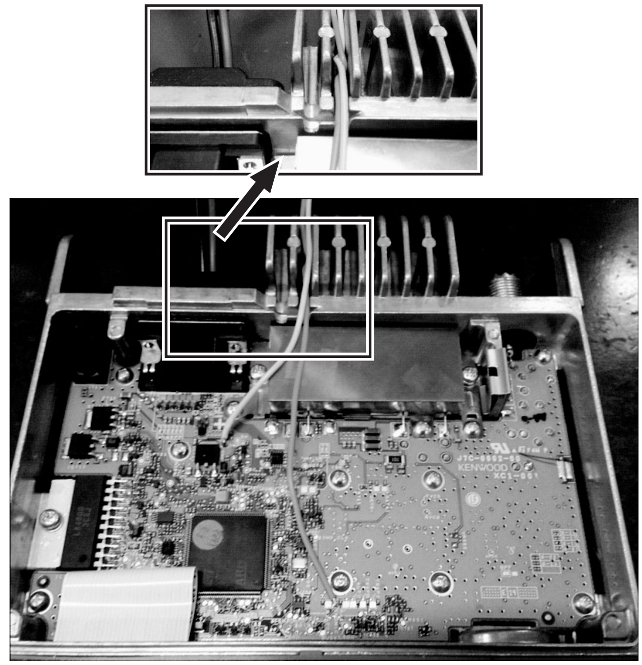
a) solder the MIC +ve cable (signal line) to EMGMIC solder pad

b) solder the -ve cable (GND) to GND solder pad

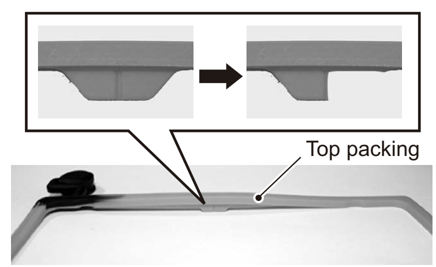


Note:
You must set up using the KPG-175D.

(3) Dress the cable as shown in the figure. The cable needs to pass through one of two indentations located on the rear panel of the transceiver.



(4) Cut off the projection of the top packing using a pair of nippers or similar tool.
If the cable is dressed to be routed through the indentations on the right side in step 4, the right side of the projection needs to be cut off.
If the cable is dressed to be routed through the indentations on the left side, the left side of the projection needs to be cut off.
Following is a figure presenting an example for when the right side of the projection is cut off.



(5) Reinstall the top packing. Check the correct fitting of the top packing, then reinstall the cabinet and two screws for the right and left sides.

2.4 CIRCUIT DESCRIPTION

2.4.1 Frequency Configuration

The receiver utilizes double conversion. The first IF is 49.95MHz and the second IF is 450kHz. The first local oscillator signal is supplied from the PLL circuit.

The PLL circuit in the transmitter generates the necessary frequencies. Figure 1 shows the frequencies.

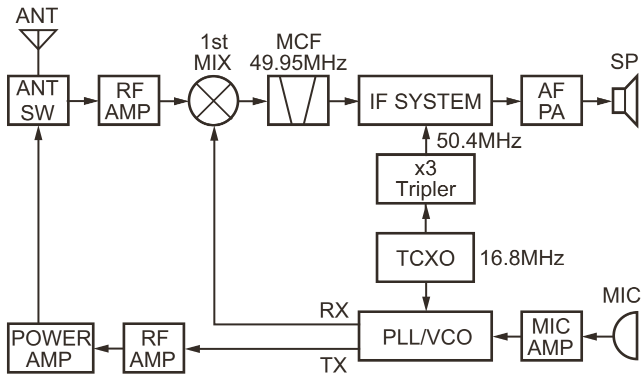


Fig.1 Frequency configuration

2.4.2 Receiver System

The receiver is double conversion superheterodyne.

The frequency configuration is shown in Figure 1.

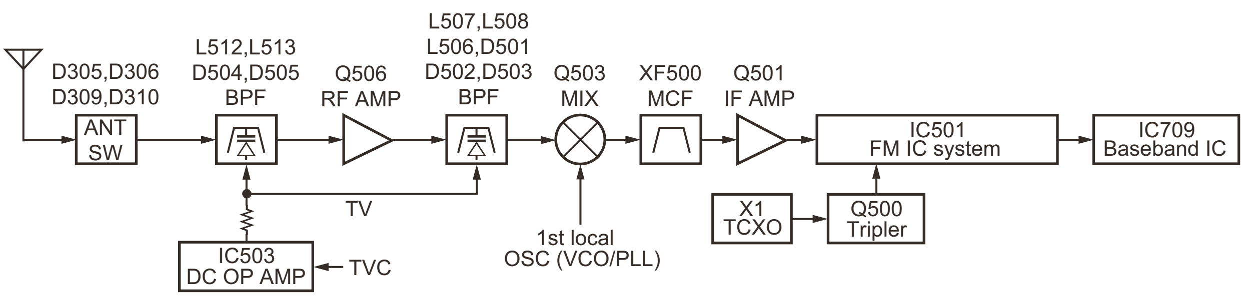


Fig.2 Receiver system

2.4.2.1 Front-end RF Amplifier

An incoming signal from the antenna is applied to an RF amplifier (Q506) after passing through a transmit/receive switch circuit (D305, D306, D309 and D310) , BPF (L512, L513, and varactor diodes : D504, D505).

After the signal is amplified (Q506), the signal is filtered by a BPF (L506, L507, L508 and varactor diodes : D501, D502, D503) to eliminate unwanted signals before it is passed to the first mixer.

The voltage of these diodes are controlled by the TVC according to the channel frequency. (See Figure 2)

2.4.2.2 First Mixer

The signal from the RF amplifier is heterodyned with the first local oscillator signal from the PLL frequency synthesizer circuit at the first mixer (Q503) to create a 49.95MHz first intermediate frequency (1st IF) signal. The first IF signal is then fed through one pair of monolithic crystal filter (MCF : XF500) to further remove spurious signals.

2.4.2.3 IF Amplifier Circuit

The first IF signal is amplified by Q501, and the enters IC501 (FM processing IC). The signal is heterodyned again with a second local oscillator signal within IC501 to create a 450kHz second IF signal. The second IF signal is fed through a 450 kHz filter in IC501 to further eliminate unwanted signals before it is amplified and FM detected in IC501.

2.4.2.4 AF Signal System

The detection signal from FM IC (IC501) goes to the baseband IC (IC709) DISC input (pin 16) after pass through IC500 for characterizing the signal.

- **Analog signal**
  The demodulated AF signal pass through IC709 with the signal processing and output at AUDIO (pin26) to the E-Vol before the Audio amplifier (IC719). The AF signal from IC719 switches between the internal speaker and speaker jack (J701) output.
- **NXDN (Digital signal)**
  The recovered 4L-FSK signal obtained from IC501 is decoded in the baseband IC (IC709).
  Decoded signal is fed into microprocessor (IC714) and converted to PCM audio signal, and return to baseband IC (IC709) for converting to audio signal.
  This audio signal will output at AUDIO (pin26) to the E-Vol before the Audio amplifier (IC719).
  The AF signal from IC719 switches between the internal speaker and speaker jack (J701) output.

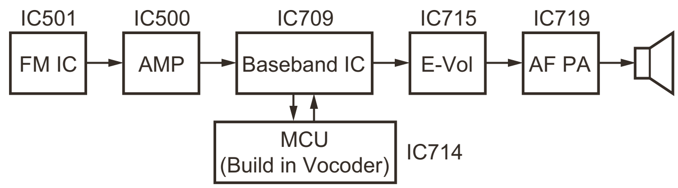


Fig.3 AF signal system

2.4.2.5 Squelch Circuit

Part of the AF signal goes a rectifier circuit to produce a DC voltage corresponding to the noise level after filtering and amplification.
This DC voltage send to MCU (IC714) SQIN input pin.
The MCU controls squelch according to the voltage (SQIN) level.
The signal from the RSSI pin of IC501 is monitored. The electric field strength of the receive signal can be known before the SQIN voltage is input to the MCU, and the scan stop speed is improved.

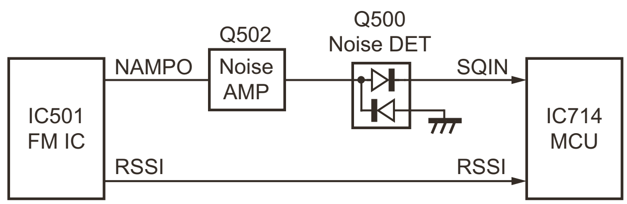


Fig.4 Squelch circuit

2.4.3 Transmitter System

2.4.3.1 Outline

The transmitter circuit produces and amplifies the desired frequency directly. It FM-modulates the carrier signal by means of a varicap diode.

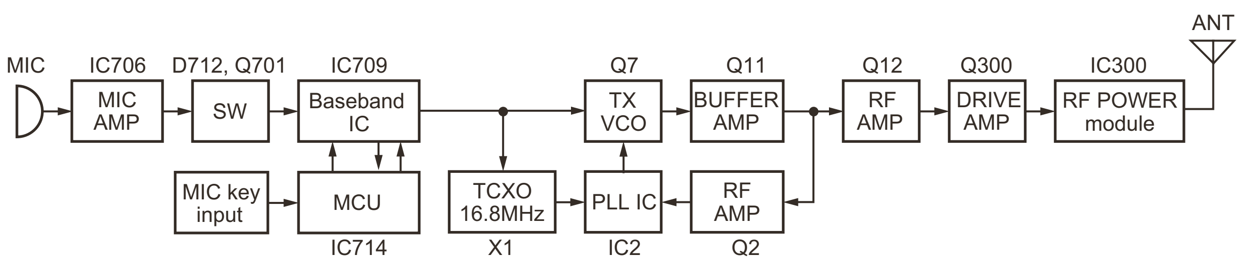


Fig.5 Transmitter system

2.4.3.2 Power Amplifier Circuit

The transmit output signal from the VCO passes through the transmission/reception selection diode (D16) and amplified by Q300.
The amplified signal goes to the RF power module (IC300) through a low-pass filter.
The lowpass filter removes unwanted high-frequency harmonic components, and the resulting signal is goes the antenna terminal.

2.4.3.3 APC Circuit

The automatic transmission power control (APC) circuit detects part of a final amplifier output with a coupler circuit and applies a voltage to IC301.
IC301 compares the APC control voltage (APCC) generated by the baseband IC (IC709) and DC amplifier (IC503) with the detection output voltage.
IC301 generates the voltage to control IC300 and stabilizes transmission output.
The APC circuit is configured to protect over current of Q300 and IC300 due to fluctuations of the load at the antenna end and to stabilize transmission output at voltage and temperature variations.

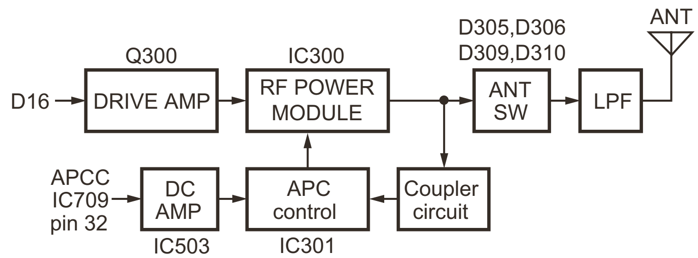


Fig.6 APC circuit and Power amplifier circuit

2.4.4 PLL Frequency Synthesizer

The PLL circuit generates the first local oscillator signal for reception and the RF signal for transmission.

2.4.4.1 PLL Circuit

The frequency step of the PLL is 2.5, 5.0, 6.25 or 7.5 kHz. A 16.8MHz reference signal is divided at IC2 by a fixed counter to produce the reference frequency.
The voltage controlled oscillator (VCO) feedback output is divided by a programmable counter in IC2.
The 2 signals are phase compared, filtered through a low pass filter and passed to VCO to control the oscillator frequency.

2.4.4.2 VCO Circuit

The operating frequency is generated by Q7 in transmit mode and Q5 in receive mode.
The oscillator frequency is controlled by applying the control voltage, which obtained from the phase comparator, to varactor diodes (D5, D6, D9, D10, D11 in transmit mode and D7, D8, D12, D13, D14 in receive mode).
The TX/RX pin is set “High” in receive mode causing turn on Q9. And T/R pin is set “Low” in transmit mode causing turn on Q6.

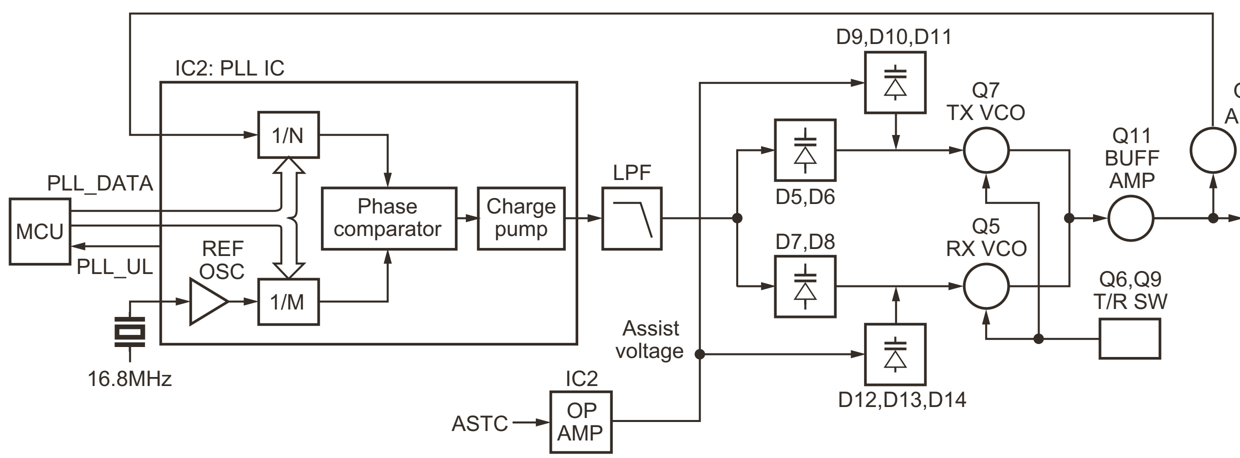


Fig.7 PLL and VCO circuit

2.4.4.3 Unlock Circuit

If low level appears at the “LD” pin of IC2, then PLL an unlock condition occurs.
It causes the voltage applied to the “PLL_UL” pin of the microprocessor to go low.
When the microprocessor detects this condition, the transmitter is disabled by ignoring the push-to-talk switch input signal.

2.4.5 Control Circuit

The MCU carries out the following tasks:

(1) Controls the FM IC (IC501).
(2) Controls the baseband IC (IC709).
(3) Controls the PLL (IC2) & TX/RX outputs.
(4) Controls IO expender through I2C level converter.
(5) Controls the display unit.

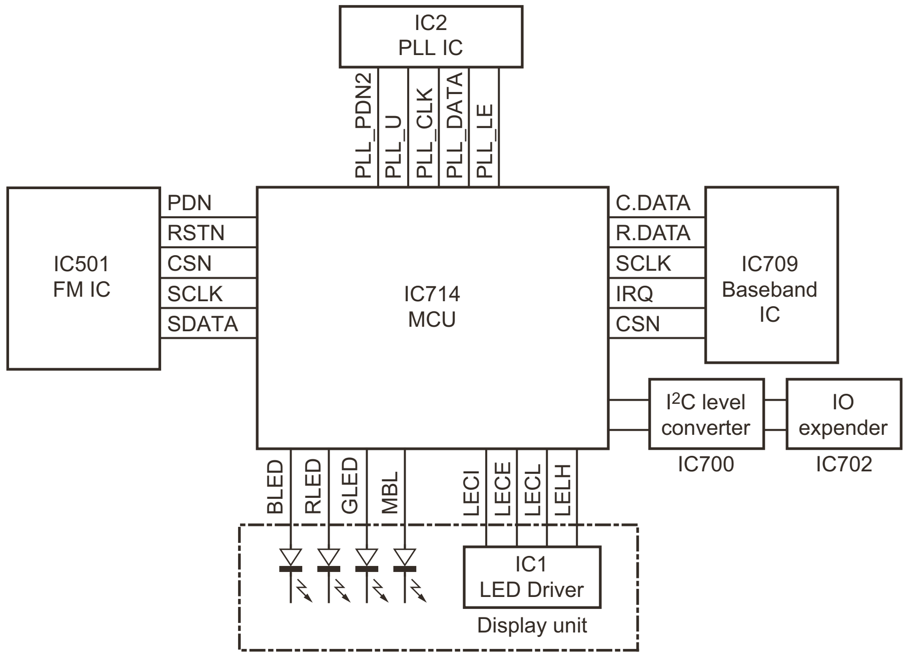


Fig.8 Control circuit

2.4.5.1 Memory Circuit

The transceiver has an 256k-bit EEPROM (IC716). The EEPROM contains adjustment data. The MCU (IC714) controls the EEPROM through three serial data lines.

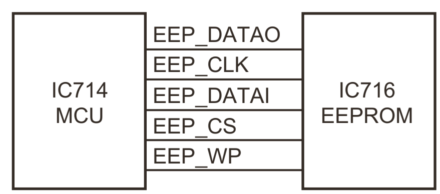


Fig.9 Memory circuit

2.4.5.2 Display Circuit

The MCU (IC714) controls the Display 7-segment LED and LEDs.

When power is on, the MCU will use the MBL line to control the key backlight LEDs.

When the transceiver is busy, the GLED line goes high, Q1 turns on and the green LED (D23) lights after Q4 turn on. In transmit mode, the RLED line goes high, Q2 and Q8 turns on and the red LED (D23) lights.

BLED will be set high when the function select (FPU setting) is on, Q6 turn on and the blue LED (D22) lights.

The dimmer function is controlled by the switch Q5. The LED driver (IC1) controls the functions of the 7-segment LED through the LEDI, LECE, LECL, LELH lines from the MCU.

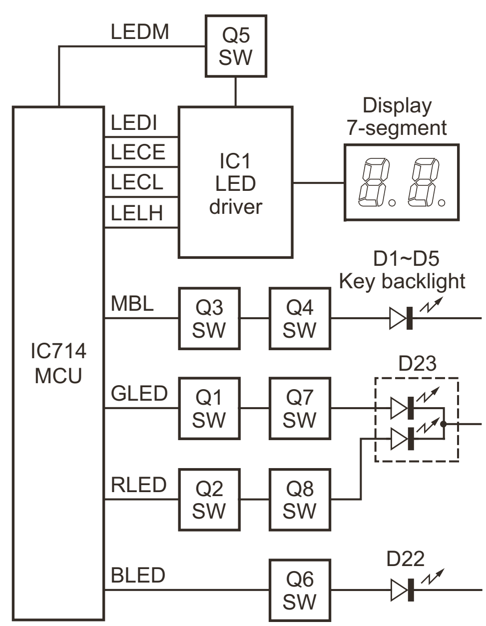


Fig.10 Dsplay circuit

2.4.5.3 Key Matrix Circuit

The front panel has function keys. Each of them is connected to a cross point of a matrix of the KMI1 to KMO3 ports of the microprocessor.
The KMO1 to KMO3 ports are always high, while the KMI1 to KMI3 ports are always low.
The microprocessor monitors the status of the KMI1 to KMO3 ports. If the state of one of the ports changes, the microprocessor assumes that the key at the matrix point corresponding to that port has been pressed.

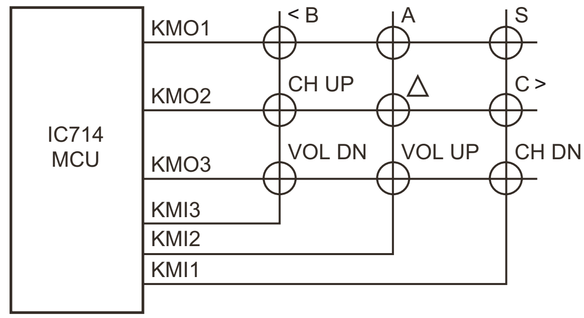


Fig.11 Key matrix circuit

2.4.6 Signaling Circuit

2.4.6.1 Encode

(1) **Low-speed data (QT, DQT)**
Low-speed data is output from pin 40 (LSDO) of the MCU (IC714).
The signal passes through a low-pass CR filter. The signal is mixed with the audio signal and goes to the VCO and TCXO (X1) modulation input after signal processing in the baseband IC (IC709).

(2) **High-speed data (2-tone)**
High-speed data (HSD) is output from pin 41 (HSDO) of the MCU.
The signal passes through a low-pass CR filter. TX deviation making an adjustment by microprocessor is applied to the baseband IC (IC709).
The signal is mixed with the audio signal and goes to the VCO and TCXO.
The side tone is audio ouput of baseband IC(IC709) at the same time to audio power amplifier and then to the speaker.

(3) **MSK / DTMF**
MSK and DTMF signal is self genarated by the baseband IC (IC709).
The TX deviation adjustment is done by the output gain of baseband IC (IC709), and is routed to the VCO.
When encoding MSK/DTMF, the microphone-input signal is muted.

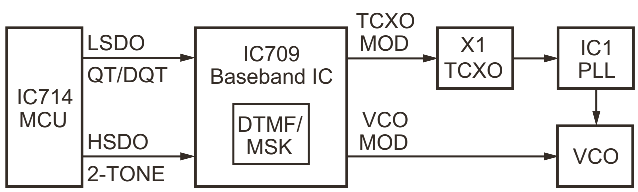


Fig.12 Encode

2.4.6.2 Decode

(1) **Low-speed data (QT, DQT)**
The demodulated signal from the FM IC (IC501) will input to baseband IC(IC701) to remove frequency above 300Hz.
The signal is input to pin 26 (LSDI) of the MCU.
The MCU digitizes this signal, performs processing such as DC restoration, and decodes the signal.

(2) **High-speed data (2-tone)**
The demodulated signal from the FM IC (IC501) is amplified by baseband IC and passes through a band-pass filter in IC709 to remove frequency of 3kHz or above and 300Hz or below.
The MCU digitizes this signal anddecodes the signal after receive the signal at pin 27(HSDI).

(3) **MSK / DTMF**
The demodulated signal from theFM IC(IC501) will input to baseband IC(IC709), then the baseband IC will decode and send the decode information to MCU by the data line.
The MCU then processes the decoded information.

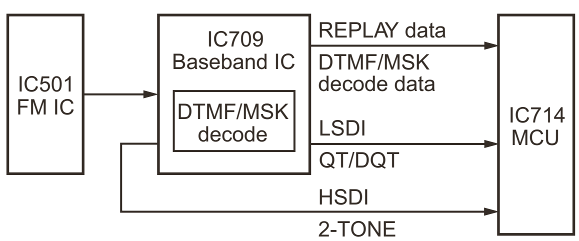


Fig.13 Decode

2.4.6.3 NXDN Receiving

- For Digital Data Mode:
  The demodulated signal from IC501 (Pin13) feed into baseband IC (Pin 16) for NXDN decoding.
  The decoded digital data will pass to MCU through C-BUS. MCU determines whether or not to output sound from speaker by checking if the data match.
- For Digital Voice Mode:
  If the digital data match in MCU, the digital voice payload data will goes into Vocoder in MCU for conversion to PCM.
  The PCM data will go to baseband IC through SPI input, where it will be converted to analog by DAC.
  Analog voice will be filtered and finally send to audio amplifier.

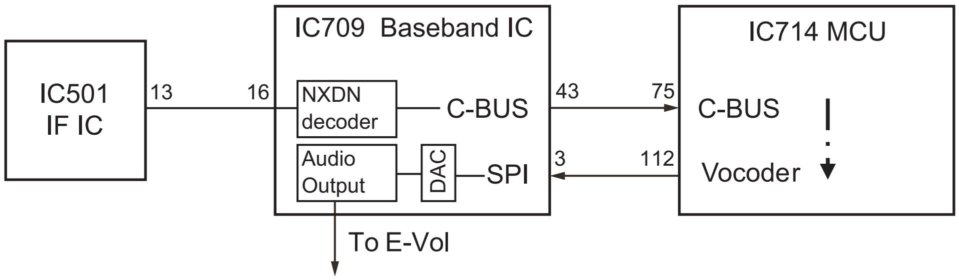


Fig.14 NXDN receiver system

2.4.6.4 NXDN Transmitting

- For Digital Data Mode:
  The digital data will be generated by MCU, where it wil be pass to baseband IC, through C-BUS for encoding process. The encoded data finally will transmit through TCXO and VCO modulation.
- For Digital Voice Mode:
  The analog voice from mic will go to ADC (after audio filter) to convert to PCM data.
  The PCM data will send to Vocoder through SPI output.
  Vocoder will convert the PCM to NXDN protocol, where it will be sent to baseband through C-BUS.
  In baseband IC, the data will be encoded and finally transmit through TCXO and VCO modulation.

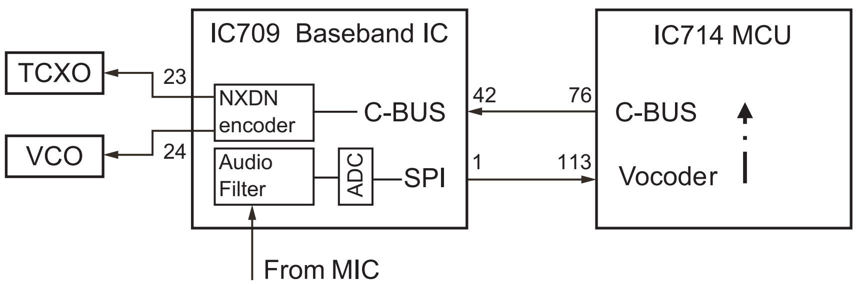


Fig.15 NXDN transmit system

2.4.7 Power Supply Circuit

- When the power switch on the display unit is pressed, the power port on the display unit which is connected pin 140 (POWKEY), goes low, then pin88 (SBC) goes high, Q718 turns on, SB SW (Q719) turns on and power (SB) is supplied to the transceiver.
- When the DC power supplied to the transceiver, the voltage regulator IC (IC720 & IC718) and supply into the MCU VDD and reset voltage detect IC (IC723). IC723 will generate signal (RESET) into the reset terminal on the MCU (IC714) to carry out a power on reset.
- When the DC power voltage deceases from normal voltage, the INT voltage detector IC (IC722) will set to high on MCU port 141 (BATT_INT). If B line becomes less than about 8.5V, MCU will send the backup data to EEPROM (IC716) and go into STOP mode. This circuit has an overvoltage protection circuit. If a DC voltage of 18V or higher is applied to the base of Q712, this voltage turns Q712 on and sets port 141 (BATT_INT) to low. As a result port 88 (SBC) is low, and turns Q719 and Q720 (SB) off.

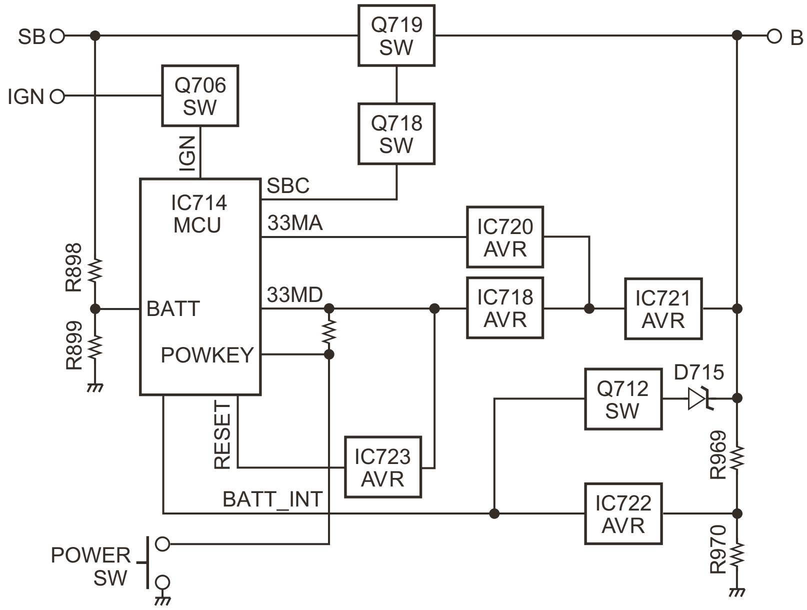


Fig.16 Power supply circuit

2.5 SEMICONDUCTOR DATA

2.5.1 MCU: 2F405ZGT6KFKA (TX-RX unit IC714)

Pin No.	Port Name	I/O	Function
1	LEDI	O	LED Data
2	LECE	O	LED Enable
3	LECL	O	LED Clock
4	LELH	O	LED Latch
5	LERE	O	LED Reset
6	VBAT	-	3.3V
7	ACR_SW	O	ACR switch for HSDO(D/A) port
8	NC	I	No connection
9	NC	I	No connection
10	I2CDT	I/O	Function P8I/O Expander I2C Data
11	I2CCK	I/O	Function P7I/O Expander I2C Data
12	EVOL_DACCE	O	Function P6CE for EVOL
13	EVOL_SCLK	O	Function P5CLK for EVOL
14	EVOL_DATA	O	Function P4DATA for EVOL
15	/INT15P	I/O	Function P3I/O Expander Interrupt
16	VSS	-	GND
17	VDD	-	33MD
18	BEEP	O	Beep for Side Tone
19	NC	I	No connection

Pin No.	Port Name	I/O	Function
20	PCBVER	I	PCB version identification
21	IFDET	I	IFDET for ACR improvement
22	DISC_DC (optional)	I	for Discriminator DC Level Adjustment
23	XIN	I	Crystal (19.2MHz)
24	NC	I	No connection
25	RESET	I	MCU Reset pin
26	LSDI	I	Low-Speed Data Input
27	HSDI	I	High-Speed Data Input
28	TEMP_1	I	Temperature 1
29	TEMP_2	I	Temperature 2
30	VDD	-	33MD
31	VSSA	-	GND
32	VREF+	-	33MA
33	VDDA	-	33MA
34	TEST_TX	I/O	UART_TX for Debug
35	TEST_RX	I/O	UART_RX for Debug
36	FNC_1(TXD0)	I/O	Function P1(TXD)
37	FNC_2(RXD0)	I/O	Function P2(RXD)
38	VSS	-	GND

Pin No.	Port Name	I/O	Function
39	VDD	-	33MD
40	LSDO	O	Low-Speed Data Output
41	HSDO	O	High-Speed Data Output
42	3CC	O	33C Control
43	5CC	O	5C Control
44	SQIN	I	Squelch Input
45	RSSI	I	RSSI Input
46	BATT	I	Battery Voltage
47	CVIN	I	VCO Lock Voltage
48	BOOT_1	I	Test Point to enable Bootloader
49	TEST_1	I/O	Test Point 1 for Debug
50	TEST_2	I/O	Test Point 2 for Debug
51	VSS	-	GND
52	VDD	-	33MD
53	PLL_DATA	O	PLL IC Data
54	PLL_LE	O	PLL IC Enable
55	PLL_CLK	O	PLL IC Clock
56	PLL_PDN2	O	PLL IC Power Down
57	PA	O	Public Address
58	AMP_SW	O	AF amplifier
59	9TC	O	9T Control
60	BSFT	O	Beat Shift
61	VSS	-	GND
62	VDD	-	33MD
63	KMO3	O	Key Matrix Output 3
64	KMO2	O	Key Matrix Output 2
65	KMO1	O	Key Matrix Output 1
66	KMI1	I	Key Matrix Input 1
67	KMI2	I	Key Matrix Input 2
68	KMI3	I	Key Matrix Input 3
69	TXD2	O	2nd UART for DE15
70	RXD2	I	2nd UART for DE15
71	VCAP_1	-	2.2uF
72	VDD	-	33MD
73	CML_CSN	O	C-BUS Chip Select
74	CML_SCLK	O	C-BUS Clock
75	CML_RDATA	I	C-BUS Reply Data
76	CML_CDATA	O	C-BUS Command Data
77	EEP_DATAO	O	EEPROM Data Out
78	EEP_DATAI	I	EEPRON Data In
79	EEP_SCLK	O	EEPROM Clock
80	EEP_CS	O	EEPROM Chip Select
81	EEP_WP	O	EEPROM Write Protect
82	BUCNT1	O	PTT/TXD buffer control
83	VSS	-	GND

Pin No.	Port Name	I/O	Function
84	VDD	-	33MD
85	MKEYI	I	DTMF MIC key input
86	BUCNT2	O	DTMF MIC buffer control
87	PLL_UL	I	PLL Unlock Detect
88	SBC	O	SB Control
89	MKEYO	O	DTMF MIC Key output
90	9RC	O	9R Control
91	PTT	I	PTT
92	HOOK	I	Hook
93	ASTSW	O	Assist Speed-up Switch
94	VSS	-	GND
95	VDD	-	33MD
96	FM_SDATA	O	FM IC Data In/Out
97	FM_RSTN	O	FM IC Hardware Reset
98	FM_SCLK	O	FM IC Clock
99	FM_CSN	O	FM IC Chip Select
100	FM_PDN	O	FM IC Power Down
101	TXD	O	Serial Data to Mic Jack
102	RXD	I	Serial Data from Mic Jack
103	TXRX	O	TX / RX Switch
104	HORN	O	Horn Alert
105	SWDIO	I/O	SWDIO for SWD
106	VCAP2	-	2.2uF
107	VSS	-	GND
108	VDD	-	33MD
109	SWCLK	I/O	SWCLK for SWD
110	CML_SSOUT	I	Audio Codec Chip Select
111	CML_EPSCLK	I	Audio Codec Clock
112	CML_EPSO	O	Audio Codec Data Out
113	CML_EPSI	I	Audio Codec Data In
114	NC	I	No connection
115	LEDM	O	LED Dimmer
116	MBL	O	Panel and Mic Key Backlight
117	FNC_4 (CTS0)	I	Function P4(CTS)
118	FNC_3(RTS0)	O	Function P3(RTS)
119	NC	I	No connection
120	VSS	-	GND
121	VDD	-	33MD
122	33BC	O	BB IC power supply control
123	MIC1MUTE	O	Internal Mic Mute
124	MIC2MUTE	O	External Mic Mute
125	SP_MUTE	O	Speaker Mute
126	SIM1	I	Shimuke port 1
127	SIM2	I	Shimuke port 2
128	NC	O	No connection

Pin No.	Port Name	I/O	Function
129	NC	O	No connection
130	VSS	-	GND
131	VDD	-	33MD
132	NC	O	No connection
133	SWO	O	SWO for SWD
134	SRST	O	SRST for SWD
135	BLULED	O	Blue LED
136	GRNLED	O	Green LED
137	REDLED	O	Red LED
138	BOOT_0		Test Point to enable Bootloader
139	IGN	I	Ignition Sense
140	POWKEY	I	Power Key Input
141	BATT_INT	I	MCU Stop
142	CML_IRQ	I	Baseband IC IRQ (CML_pin8)
143	Power On Reset	I	33MD
144	VDD	-	33MD

2.6 COMPONENTS DESCRIPTION

2.6.1 Display Unit (X54-3890-20)

Ref. No.	Part Name	Description
IC1	IC	LED driver
Q1, Q2	Transistor	TX/RX indication LED switch
Q3, Q4	Transistor	KEY backlight control switch
Q5, Q9	Transistor	LED dimmer control switch
Q6	Transistor	Indication LED switch
Q7, Q8	Transistor	TX/Busy indication LED switch
D1~D5	LED	KEY backlight
D20	Diode	Voltage protection
D22	LED	Indication
D23	LED	TX/Busy indication
D33	Zener diode	Surge protection
D37	LED	LED display

2.6.2 TX-RX Unit (XC1-0010-XX)

Ref. No.	Part Name	Description
IC2	IC	PLL IC
IC3	IC	Assist Filter
IC301	IC	APC DC amplifier
IC500	IC	DETAF amplifier
IC501	IC	FM IC
IC502	IC	Voltage regulator (33MS)
IC503	IC	RF BPF DC amplifier
IC700	IC	I2C level shifter
IC701	IC	3.3V level shifter (RXDO/CTSO)
IC702	IC	IO expander
IC703	IC	5V level shifter (TXDO/RTSO)
IC704	IC	RS-232C driver
IC705	IC	5V level shifter (TXD2)
IC706	IC	MIC/AFO amplifier
IC709	IC	Baseband IC
IC710	IC	Voltage regulator (33BD)
IC713	IC	19.2MHz amplifier
IC714	IC	MCU
IC715	IC	Evol/DAC
IC716	IC	EEPROM
IC717	IC	Voltage regulator (9R)
IC718	IC	Voltage regulator (33MD)
IC720	IC	Voltage regulator (33MA)
IC721	IC	Voltage regulator (5M)
IC722	IC	Voltage detection (INT)
IC723	IC	Voltage detection (Reset)
IC724	IC	5V level shifter (MKEY/PTT)
IC725	IC	3.3V level shifter (MKEY/PTT)
IC726	IC	Voltage regulator (33C)
Q2	Transistor	PLL Fin amplifier
Q3, Q4	FET	Assist filter control switch
Q5	FET	RX VCO
Q6	FET	TX/RX VCO switch
Q7	FET	TX VCO
Q9	Transistor	TX/RX VCO switch
Q10	Transistor	Ripple filter
Q11	Transistor	VCO buffer amp
Q12	Transistor	VCO common amp
Q300	FET	Drive amp
Q500	Transistor	RX 2nd local amp
Q501	Transistor	1st IF amp
Q502	Transistor	Squelch amp
Q503	FET	Mixer
Q504	Transistor	Squelch input switch
Q505	Transistor	Squelch input control switch
Q506	FET	Front-end LNA
Q700	FET	MIC mute switch
Q701	Transistor	MIC mute switch
Q702	Transistor	Horn alert control switch
Q703	FET	Horn alert switch
Q704	Transistor	DETO amp
Q705	FET	MOD2 switch
Q706	Transistor	Ignition sense control switch
Q707	Transistor	9R control switch
Q708	Transistor	9T control switch
Q709	Transistor	9R switch

Ref. No.	Part Name	Description
Q710	Transistor	9T switch
Q711	Transistor	5C control switch
Q712	Transistor	Overvoltage detect
Q713	Transistor	Overvoltage detect
Q714, Q715	FET	Speaker mute switch
Q716	Transistor	5C switch
Q717	FET	33BA switch
Q718	Transistor	SB control switch
Q719	FET	SB switch
Q720	Transistor	AF amp switch
Q721	FET	5MS switch
Q722	Transistor	5MS control switch
Q723	Transistor	33BA control switch
D5	Variable Capacitance Diode	TX VCO tune
D6	Variable Capacitance Diode	TX VCO tune
D7	Variable Capacitance Diode	RX VCO tune
D8	Variable Capacitance Diode	RX VCO tune
D9	Variable Capacitance Diode	TX VCO tune
D10	Variable Capacitance Diode	TX VCO tune
D11	Variable Capacitance Diode	TX VCO tune
D12	Variable Capacitance Diode	RX VCO tune
D13	Variable Capacitance Diode	RX VCO tune
D14	Variable Capacitance Diode	RX VCO tune
D15	Variable Capacitance Diode	Modulation Control (TX VCO)
D16, D17	Diode	TX/RX band switch
D300	Zener Diode	Voltage Protection
D301	Diode	TX power control
D304	Diode	Reverse power rectifier
D305, D306	Diode	ANT switch
D307, D308	Diode	Power rectifier
D309, D310	Diode	ANT switch
D500	Diode	Squelch voltage rectifier
D502~ D505	Variable Capacitance Diode	RF BPF tuning
D700~ D702	Diode	Surge protection
D704~ D711	Diode	Surge protection
D712, D713	Diode	MIC AGC detection
D714, D715	Diode	RXD2 level shifter
D717	Zener Diode	Voltage Protection
D718	Diode	5M stabalize
D719	Surge Absorber	Voltage Protection
D720	Diode	PTT
D721	Diode	Hook

2.7 TERMINAL FUNCTION

2.7.1 Display unit (X54-3890-20)

Pin No.	Name	I/O	Function
CN1			
1	POWER	O	Detection output of power switch
2	MKEY	I/O	MIC data detection
3	PTT/TXD	I/O	PTT/PC serial data
4	HOOK/RXD	I/O	HOOK/PC serial data
5	ME	-	MIC ground
6	MIC	O	MIC signal output
7	GND	-	Ground
8	NC	-	-
9	LELH	I	LED latch input
10	LECL	I	LED clock input
11	LECE	I	LED enable input
12	LEDI	I	LED data input
13	5C	I	5V DC power supply
14	KMI3	O	Key matrix output 3
15	KMI2	O	Key matrix output 2
16	KMI1	O	Key matrix output 1
17	KMO3	I	Key matrix input 3
18	KMO2	I	Key matrix input 2
19	KMO1	I	Key matrix input 1
20	BLED	I	Blue LED control signal input
21	GLED	I	Green LED control signal input
22	RLED	I	Red LED control signal input
23	MBL	I	MIC backlight control signal input
24	LEDM	I	LED dimmer input
25	SP-	I	Speaker input -
26	SP-	I	Speaker input -
27	SP+	I	Speaker input +
28	SP+	I	Speaker input +
29	SB	I	Battery voltage DC supply
30	SB	I	Battery voltage DC supply

Pin No.	Name	I/O	Function
J1(MIC Jack)			
1	MBL	O	Backlight of Microphone
2	SB	O	Battery voltage DC supply
3	GND	-	Ground
4	PTT	I	PTT/ PC serial data from radio
5	ME	-	MIC ground
6	MIC	I	MIC signal input
7	HOOK	I	HOOK/ PC serial data to radio
8	DM	I/O	MIC data detection

2.7.2 TX-RX unit (XC1-0010-XX)

Pin No.	Name	I/O	Function
CN700			
1	SB	O	Battery voltage DC supply
2	SB	O	Battery voltage DC supply
3	SP-	O	Speaker input -
4	SP-	O	Speaker input -
5	SP+	O	Speaker input +
6	SP+	O	Speaker input +
7	LEDM	O	LED dimmer output
8	MBL	O	MIC backlight control signal output
9	RLED	O	Red LED control signal ouput
10	GLED	O	Green LED control signal output
11	BLED	O	Blue LED control signal output
12	KMO1	O	Key matrix output 1
13	KMO2	O	Key matrix output 2
14	KMO3	O	Key matrix output 3
15	KMI1	I	Key matrix input 1
16	KMI2	I	Key matrix input 2
17	KMI3	I	Key matrix input 3
18	5MS	O	5V DC power supply
19	LEDI	O	LED data output
20	LECE	O	LED enable output
21	LECL	O	LED clock output
22	LELH	O	LED latch output
23	LERE	O	LED reset output
24	GND	-	Ground
25	MIC	I	MIC signal input
26	ME	-	MIC ground
27	HOOK/RXD	I/O	HOOK/PC serial data
28	PTT/TXD	I/O	PTT/PC serial data
29	MKEY	I/O	MIC data detection
30	POWER	I	Detection input of power switch

Pin No.	Name	I/O	Function
J700 (D-SUB 15pin)			
1	SB	O	Battery voltage DC supply DC 13.6V±15%,1.0A max
2	IGN	I	Ignition sens input,16.0V max
3	SP2	O	Speaker output
4	DETO	O	FM detector output, 500mVp-p
5	DATAI	I	External transmit signal input 200±50mVp-p
6	FNC1	I/O	Programable I/O (programmed by FPU) 1.0mA max.
7	FNC2	I/O	Programable I/O (programmed by FPU) 1.0mA max.
8	FNC3	I/O	Programable I/O (programmed by FPU) 1.0mA max.
9	FNC4	I/O	Programable I/O (programmed by FPU) 1.0mA max.
10	FNC5	I/O	Programable I/O (programmed by FPU) 1.0mA max.
11	FNC6	I/O	Programable I/O (programmed by FPU) 1.0mA max.
12	5MS	O	5V DC power supply, 100mA max
13	HR1	O	Horn alert signal output,16.0V/ 2.0A max.
14	HR2	O	Horn alert signal output,16.0V/ 2.0A max.
15	GND	-	Ground

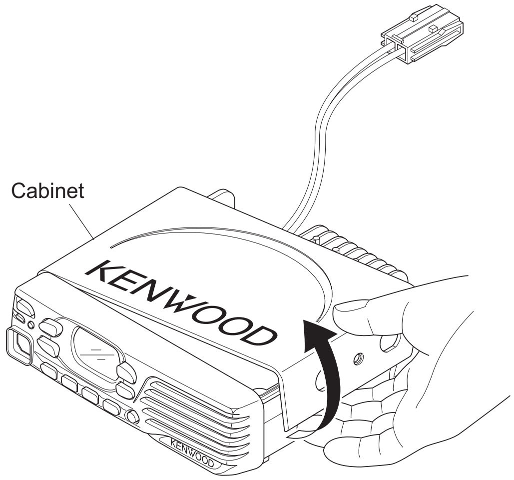
2.7.3 Function Port Assignment

	GPS (NMEA)	
	Name	I/O
FNC1	None	O
FNC2	GPS (NMEA Input)	I
FNC3	-	-
FNC4	-	-
FNC5	-	-
FNC6	-	-
FNC7	-	-
FNC8	-	-

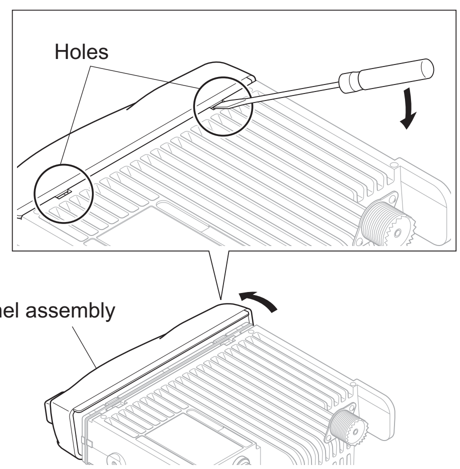
SECTION 3
DISASSEMBLY

3.1 Disassembly Procedure

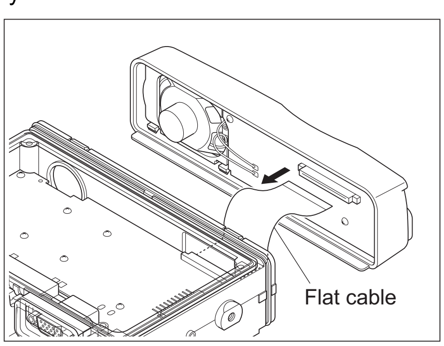
(1) When removing the cabinet, first remove the two screws from the right and left with a phillips screwdriver.
Then, hook your finger on the edge of the cabinet and pull it out until it is over the chassis protrusion. Remove the cabinet by prying the cabinet as shown below.



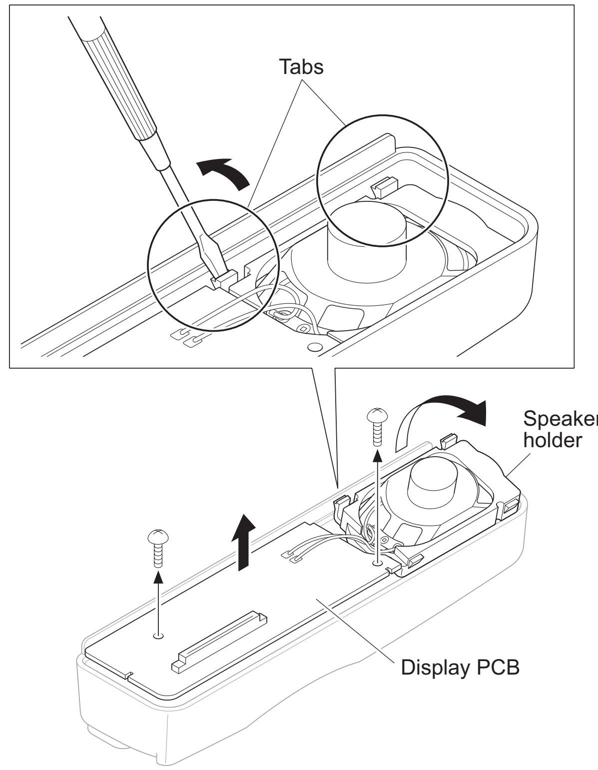
(2) To remove the panel assembly, first turn the transceiver upside down.
Then, insert a flat-head screwdriver into the holes of the chassis and tilt it in the direction as shown by the arrow.



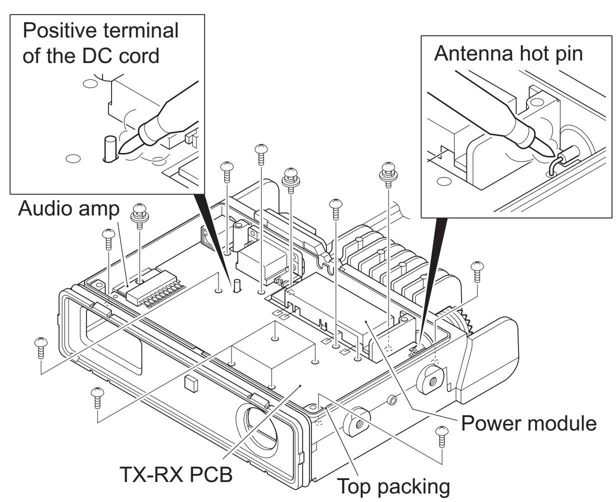
(3) Disconnect the flat cable from connector of the panel assembly.



(4) To remove the speaker holder, first remove the two screws from the display PCB using a phillips screwdriver.
Then, insert a flat-head screwdriver under the tabs of the speaker holder and tilt it in the direction shown by the arrow.
Remove the speaker from the front panel by turning it in the direction indicated, together with the speaker holder and display PCB.

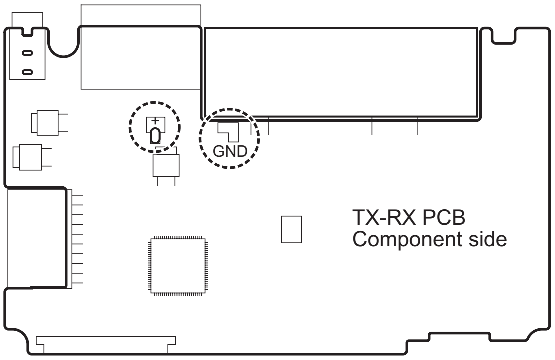


(5) When removing the TX-RX PCB, first remove the top packing.
Then, remove the solder of the antenna hot pin and positive terminal of the DC cord.
Remove the 15 screws from the TX-RX PCB, power module, and audio amp.

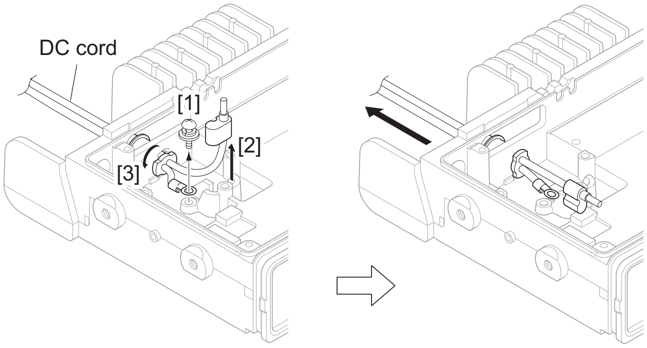


Note:

When you supply power to the TX-RX PCB after removing the TX-RX PCB from the chassis, solder the positive and ground terminals of the DC cord (Recommendation: E30-3448-25) to the + and GND terminals of the TX-RX PCB.

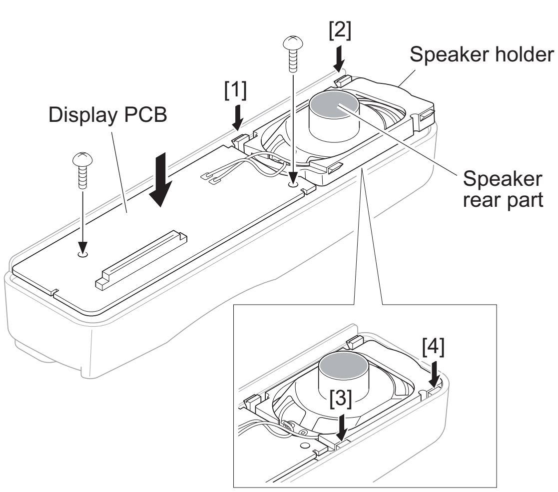


(6) Pull it out behind the chassis by rotating the bush [3] of the DC cord 90 degrees in the direction of the arrow after the screw [1] in the negative terminal is removed, and the positive terminal [2] is removed from the chassis.

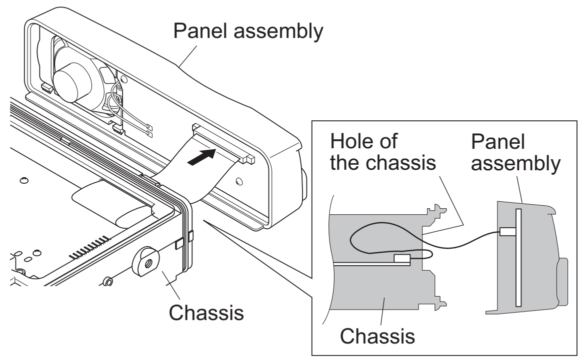


3.2 Precautions for Reassembly

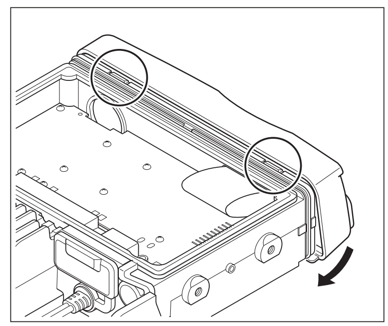
(1) When mounting the speaker holder, while suppressing the speaker rear part (shaded area), fix the four tabs of the speaker holder into the hollows of the front panel in order ([1], [2], [3], and [4]). Then, tighten the two screws of the display PCB.



(2) When mounting the panel assembly, pass the flat cable through the hole of the chassis as shown below then connect the flat cable to connector of the panel assembly.

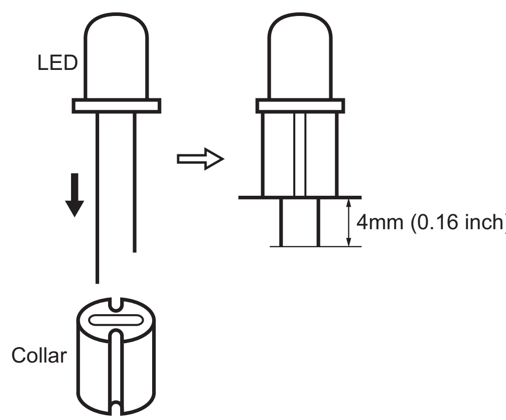


(3) Fit the panel assembly into the two tabs of the chassis top side first.
Then, fit the panel assembly into the two tabs of the chassis bottom side by turning the panel assembly.



3.3 Correspondence when replacing the LED (B30-2321-05)

When replacing the LED (B30-2321-05), cut the leg of the LED to 4mm (0.16 inch) after installing the Collar (J31-0565-15).

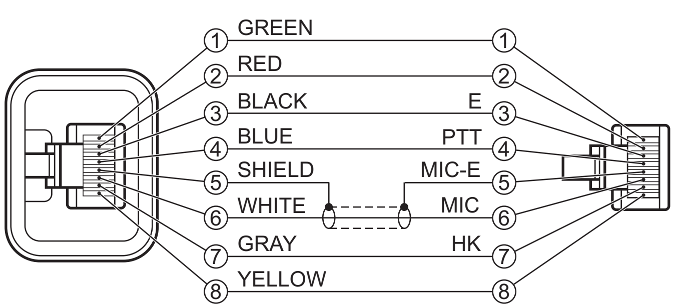


SECTION 4
ADJUSTMENT

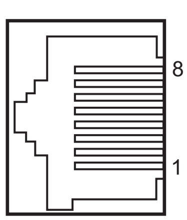
4.1 Test Equipment Required for Alignment

Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range	100 to 520MHz
	Modulation	Frequency modulation and external modulation
	Output	-127dBm/0.1µV to greater than -7dBm/100mV
2. Power Meter	Input Impedance	50Ω
	Operation Frequency	100 to 520MHz
	Measuring Range	Vicinity of 100W
3. Deviation Meter	Frequency Range	100 to 520MHz
4. Digital Volt Meter (DVM)	Measuring Range	1V to 20V DC
	Input Impedance	High input impedance for minimum circuit loading
5. Oscilloscope		DC through 30MHz
6. High Sensitivity Frequency Counter	Frequency Range	10Hz to 1000MHz
	Frequency Stability	0.2ppm or less
7. Ammeter		20A
8. AF Volt Meter (AF VM)	Frequency Range	50Hz to 10kHz
	Voltage Range	1mV to 3V
9. Audio Generator (AG)	Frequency Range	20Hz to 20kHz or more
	Output	0 to 1V
10. Distortion Meter	Capability	3% or less at 1kHz
	Input Level	50mV to 10Vrms
11. 4Ω Dummy Load		Approx. 4Ω, 10W or more
12. Regulated Power Supply		13.6V, approx. 20A (adjusted from 9 to 17V) Useful if ammeter equipped

■Test cable for microphone input (E30-3360-28)



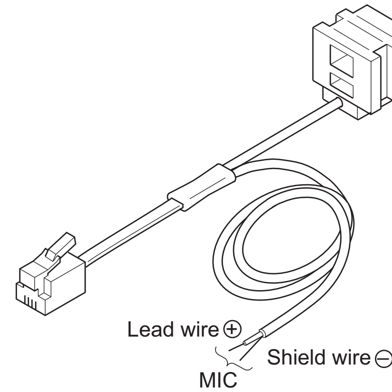
■MIC connector (Front panel view)



1 : MBL
2 : SB
3 : GND
4 : PTT
5 : ME
6 : MIC
7 : HOOK
8 : DM

■Tuning cable (E30-3383-05)

Adapter cable (E30-3383-05) is required for injecting an audio if PC tuning is used.
See “PC Mode” section for the connection.



4.2 Frequency and Signaling

The transceiver has been adjusted for the frequencies shown in the following table. When required, re-adjust them following the adjustment procedure to obtain the frequencies you want in actual operation.

■Test frequency

Channel No.	RX (MHz)	TX (MHz)
1	485.05000	485.10000
2	450.05000	450.10000
3	519.85000	519.90000
4	485.00000	485.00000
5	485.20000	485.20000
6	485.40000	485.40000
7~16	-	-

■Analog Signaling

Signaling No.	RX (Decode)	TX (Encode)
1	None	None
2	None	20Hz Square wave
3	QT 67.0Hz	QT 67.0Hz
4	QT 151.4Hz	QT 151.4Hz
5	QT 210.7Hz	QT 210.7Hz
6	QT 254.1Hz	QT 254.1Hz
7	DQT D023N	DQT D023N
8	DQT D754I	DQT D754I
9	DTMF Decode (Code: 159D)	DTMF Encode (Code: 159D)
10	None	DTMF (Code: 9)
11	None	MSK (1010)
12	FleetSync (100-1000)	FleetSync (100-1000)
13	None	Single Tone (1000Hz)
14	2-tone Decode A: 304.7Hz B: 3106.0Hz	2-tone Encode A: 304.7Hz B: 3106.0Hz
15	None	DTMF Tone (1477Hz)
16	Single Tone (979.9Hz)	Single Tone (979.9Hz)
17	None	MSK PN9
18	None	DTMF (Code: 3)

■Digital Signaling

Signaling No.	RX (Decode)	TX (Encode)
1	RAN 1	RAN 1
2	None	PN9
3	RAN 1	Maximum Deviation pattern
4	FSW +PN9	MOD Set-up *1
5	Tone Pattern (1031Hz)	Tone Pattern (1031Hz)

RAN: Radio Access Number
PN9: Pseudo-Random Pattern (for production only)
*1: To output 150Hz square wave (for production only)

4.3 Preparations for Tuning the Transceiver

Before attempting to tune the transceiver, connect the unit to a suitable power supply.
Whenever the transmitter is tuned, the unit must be connected to a suitable dummy load (i.e. power meter).
The speaker output connector must be terminated with a 4Ω dummy load and connected to an AC voltmeter and an audio distortion meter or a SINAD measurement meter at all times during tuning.

■5 reference level adjustments frequency

TEST CH	RX (MHz)	TX (MHz)
Low	450.05000	450.10000
Low’	467.55000	467.60000
Center	485.05000	485.10000
High’	502.55000	502.60000
High	519.95000	519.90000

4.4 Common Section

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Setting	1) Power supply voltage DC power supply terminal : 13.6V							
2. Receive Assist voltage	1) Select each tab CH : Low CH : Low' CH : Center CH : High' CH : High * Note 1					FPU	Voltage level indicated in PC window show VCO Lock voltage. Change the adjustment to get the VCO Lock Voltage within the limit of the specified voltage.	2.5 ±0.1V
3. Transmit Assist voltage	1) Select each tab CH : Low CH : Low' CH : Center CH : High' CH : High * Note 1							

***Note 1:**

Click [Tune Assist Voltage] button on Test Mode dialog box, these adjustment can be done by automatic.
When automatic adjustment is done, Lock Voltage can not be confirmed on the window.
If you would like to confirm it, please check the lock voltage on Receive Assist Voltage adjustment window and Transmit Assist Voltage adjustment window.

4.5 Transmitter Section

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency	1) Test CH : Center (1 point) PTT ON (Transmit)	Frequency counter		ANT	TX-RX	FPU	485.100MHz	±50Hz
2. High Transmit Power	**NX-840HK** 1) Test CH : Low, Low', Center, High', High (5 point) 2) Baterry Terminal voltage : 13.6V 3) PTT ON (Transmit)	Power meter Ammeter		ANT		FPU	45.0W	±2.0W 14.0A or less
	NX-840 1) Test CH : Low, Low', Center, High', High (5 point) 2) Baterry Terminal voltage : 13.6V 3) PTT ON (Transmit)	Power meter Ammeter		ANT		FPU	25.0W	±1.0W 8.0A or less
3. Mid Transmit Power	**NX-840HK** 1) Test CH : Low, Low', Center, High', High (5 point) 2) Baterry Terminal voltage : 13.6V 3) PTT ON (Transmit)	Power meter Ammeter		ANT		FPU	25.0W	±1.0W 8.0A or less

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
4. Low Transmit Power	1) Test CH : Low, Low', Center, High', High (5 point) 2) Baterry Terminal voltage : 13.6V 3) PTT ON (Transmit)	Power meter Ammeter		ANT		FPU	5.0W	±0.1W 4.0A or less
5. DQT Balance *Note 2	**DQT Balance 1** 1) Test CH : Low, Low', Center, High', High (5 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	Make the demodulation wave into square wave	
	DQT Balance 2 1) Test CH : Low, Low', Center, High', High (5 point) 2) Deviation meter filter LPF : 3kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	The Deviation of 20Hz frequency is fixed. Change the 1kHz adjustment value to become the same deviation of 20Hz within the specified range.	±15Hz
6. Maximum Deviation (Analog Narrow)	1) Test CH : Low, Low', Center, High', High (5 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	2.0kHz (According to larger +, -)	±50Hz Note : FPU auto input 1kHz / 150mV
7. Maximum Deviation (NXDN Very Narrow) *Note 3	1) Test CH : Low, Low', Center, High', High (5 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	1.337kHz	±50Hz
8. CW ID Deviation (NXDN Very Narrow) *Note 3	1) Test CH : Center (1 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	1.00kHz	±100Hz
9. DQT Deviation (Analog Narrow)	1) Test CH : Center (1 point) 2) Deviation meter filter LPF : 3kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	0.35kHz	±40Hz
10. QT Deviation (Analog Narrow)	1) Test CH : Center (1 point) 2) Deviation meter filter LPF : 3kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	0.35kHz	±40Hz
11. DTMF Deviation (Analog Narrow)	1) Test CH : Center (1 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	1.5kHz	±50Hz

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
12. MSK Deviation (Analog Narrow)	1) Test CH : Center (1 point) 2) Deviation meter filter LPF : 15kHz HPF : OFF 3) PTT ON (Transmit)	Deviation Meter Oscilloscope		ANT		FPU	1.5kHz	±50Hz

***Note 2:**
Only 1 DQT Balance need to align(either DQT Balance1 or DQT Balance2)

***Note 3:**
(for the NXDN Very Narrow Maximum Deviation and CW ID Deviation alignment)
Must do the NXDN Very Narrow Maximum Deviation and CW ID Deviation alignment after the DQT Balance alignment and Maximum Deviation alignment (Analog).

4.6 Receiver Section

Item	Condition	Measurement			Adjustment			Specifications /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Receive Sensitivity [Semiautomatic]	1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -90dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
2. Open Squelch (5)	**[Analog Narrow]** 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -120dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
	[NXDN Very Narrow] 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -124dBm AF Freq : 400Hz Mod Dev : ±1.1kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
3. Tight Squelch	**[Analog Narrow]** 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -116dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
4. Low RSSI *Note 4	**[Analog Narrow]** 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -120dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
	[NXDN Very Narrow] 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -120dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	

Item	Condition	Measurement			Adjustment			Specifica-tions /Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
5. High RSSI *Note 4	**[Analog Narrow]** 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -80dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	
	[NXDN Very Narrow] 1) Test CH : Low, Low', Center, High', High (5 point) 2) SSG output : -80dBm AF Freq : 1kHz Mod Dev : ±1.5kHz	SSG Oscilloscope Audio Analyzer		ANT		FPU	Press [Start], [Auto tuning]	

***Note 4:**

(1) If NXDN Very Narrow RSSI tuning is selected, it will align for the NXDN Very Narrow band only.

(2) If Analog Narrow Band RSSI tuning is seleted, Analog Narrow band and NXDN Very Narrow will be align with same tuning value.

SECTION 5
TROUBLESHOOTING

5.1 Replacing TX-RX Unit

■TX-RX unit Information

Model Name	Original TX-RX unit Number	For Service TX-RX unit Number
NX-840H K	XC1-0010-11	XC2-0020-10
NX-840HU K	XC1-0010-11	XC2-0020-11
NX-840 M	XC1-0010-22	XC2-0020-21

■Supplied Accessories of "Service TX-RX unit"

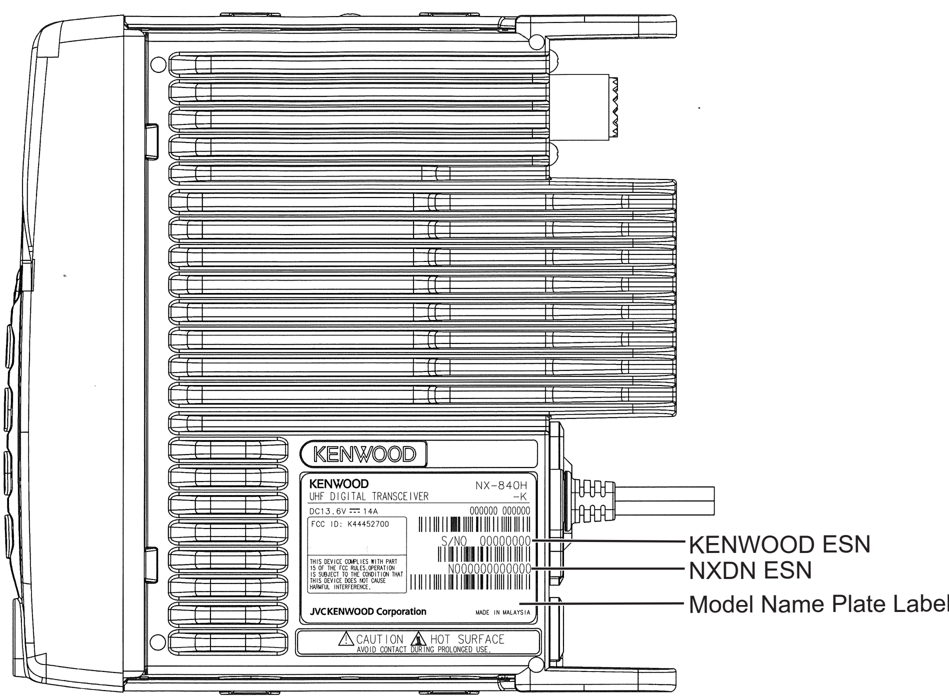
Item (Including Parts Number)	Quantity
TX-RX Unit (XC2-002)	1
Model Name Plate	1

■"Service TX-RX unit" Data

The following data is written on the service TX-RX unit:

Data Type	Description
Firmware	NX-740H/840H Firmware.
FPU Data (PC programming mode)	XC2-002 (NX-840H/840HU) K type data. XC2-002 (NX-840) M type data.
KENWOOD ESN	Model name: NX-840H, NX-840HU or NX-840 Type: K or M The same number as the Model Name Plate label is written.
NXDN ESN	The same number as the Model Name Plate label is written.

■Model Name Plate Label Layout



■After Changing the PCB

(1) Using the KPG-175D, select your desired item (Model Name and Frequency) from the Model> Product Information menu, then use Program> Write Data to the Transceiver to write the FPU data (PC Programming mode). When writing to the transceiver, a Warning Message, corresponding to the item selected, appears. Click [OK] to continue writing the data.

(2) Enter Program> Test Mode, then adjust the various adjustment data (PC Test Mode) as described in the "SECTION 4 ADJUSTMENT"

(3) Attach the new labels corresponding to the new printed circuit board. (Refer to the images right for label placement.)

(4) If necessary, write the FPU data used by the customer with the KPG-175D.

Note:

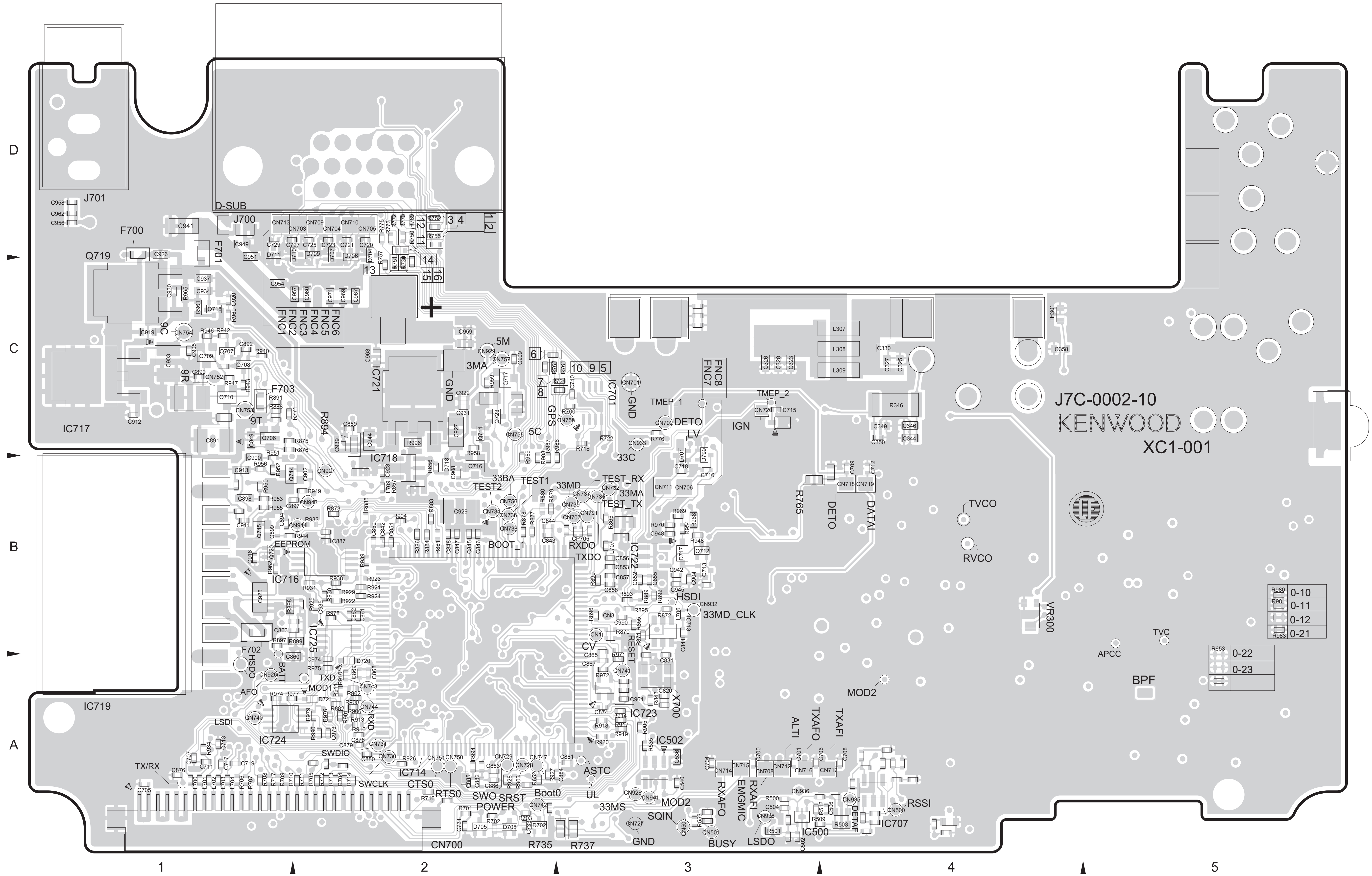
- When a new printed circuit board is used, the KENWOOD ESN changes, as does the Transceiver Information display of the KPG-175D, but this does not have any effect on the operation of the transceiver.
- If changing to the original ESN, please contact our service center.

MEMO

PRINTED CIRCUIT BOARD

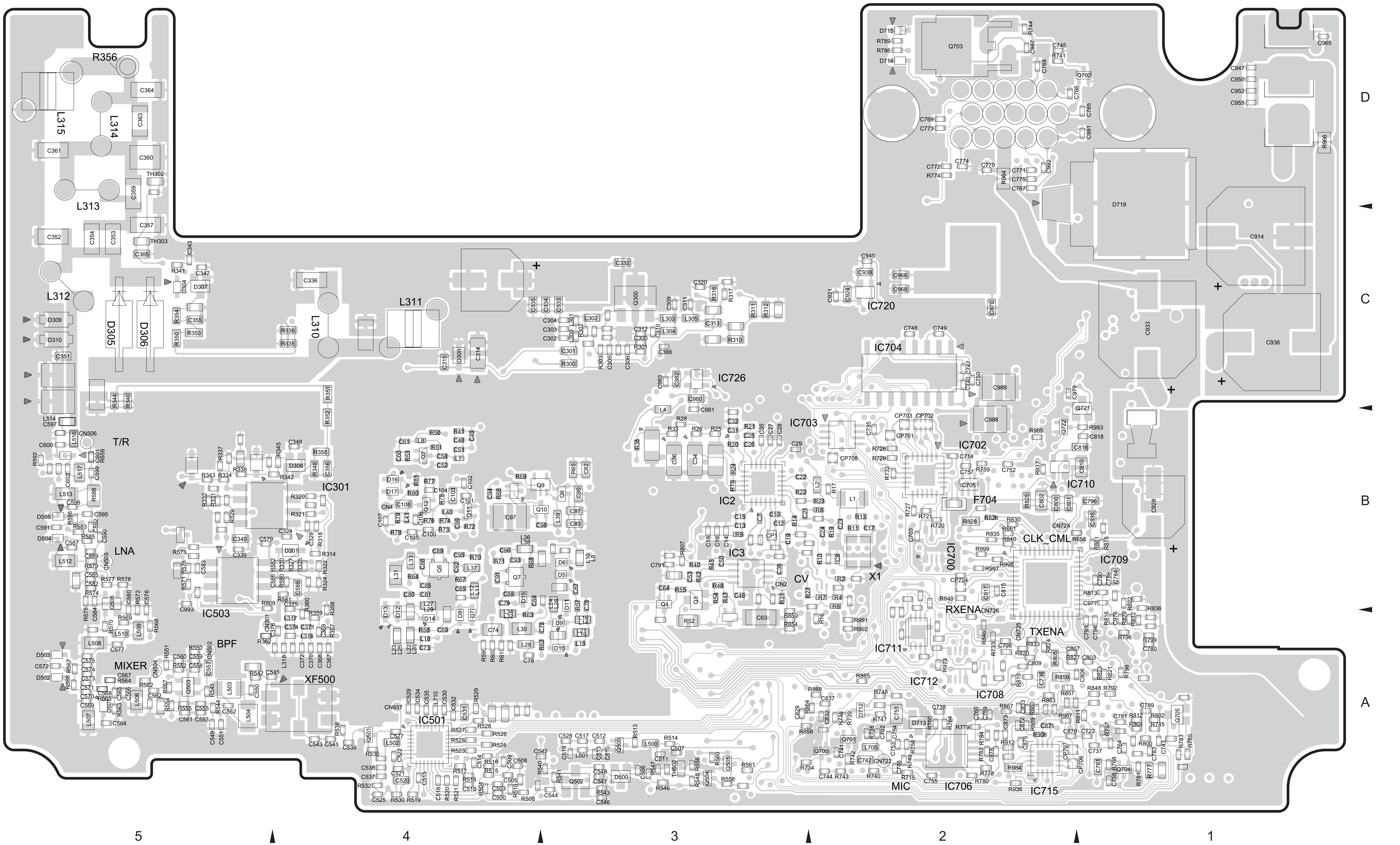
■ TX-RX UNIT (XC1-0010-11 (NX-840H(K), NX-840H(U)(K)), XC1-0010-22 (NX-840(M))

--- Component side view (J7C-0002-10) ---



■ TX-RX UNIT (XC1-0010-11 (NX-840H(K), NX-840H(U)(K)), XC1-0010-22 (NX-840(M))

--- Foil side view (J7C-0002-10) ---



● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

A-1C — Side: A; Y axis: 1; X axis: C

REF.NO.	LOCATION
IC	
IC2	B- 3B
IC3	B- 3B
IC301	B- 5B
IC500	A- 3A
IC501	B- 4A
IC502	A- 3A
IC503	B- 5B
IC701	A- 3C
IC702	B- 2B
IC703	B- 2B
IC704	B- 2C
IC705	B- 2B
IC706	B- 2A
IC709	B- 2B
IC710	B- 2B
IC713	A- 3B
IC714	A- 2B
IC715	B- 2A
IC716	A- 2B
IC717	A- 1C
IC718	A- 2B
IC720	B- 2C
IC721	A- 2C
IC722	A- 3B
IC723	A- 3A
IC724	A- 1A
IC725	A- 2B
IC726	B- 3C
TRANSISTOR	
Q2	B- 4B
Q3	B- 3B
Q4	B- 3B
Q5	B- 4B
Q6	B- 3B
Q7	B- 4B
Q9	B- 4B
Q10	B- 3B
Q11	B- 4B
Q12	B- 4B
Q300	B- 3C
Q500	B- 3A
Q501	B- 4A
Q502	B- 3A
Q503	B- 5A
Q504	B- 3A
Q505	B- 3A
Q506	B- 5B
Q700	B- 2A
Q701	B- 2A
Q702	B- 1D
Q703	B- 2D
Q704	B- 1A
Q705	B- 1A
Q706	A- 1C
Q707	A- 1C
Q708	A- 1C
Q709	A- 1C
Q710	A- 1C
Q711	A- 2C
Q712	A- 3B
Q713	A- 3B
Q714	A- 1B
Q715	A- 1B
Q716	A- 2B
Q717	A- 2C
Q718	A- 1C

REF.NO.	LOCATION
Q719	A- 1C
Q720	A- 1B
Q721	B- 1B
Q722	B- 2B
Q723	A- 2C
DIODE	
D5	B- 3B
D6	B- 3B
D7	B- 4A
D8	B- 4A
D9	B- 3A
D10	B- 3A
D11	B- 3B
D12	B- 4A
D13	B- 4A
D14	B- 4A
D15	B- 4B
D16	B- 4B
D17	B- 4B
D300	B- 4C
D301	B- 4B
D304	B- 5C
D305	B- 5C
D306	B- 5C
D307	B- 5C
D308	B- 4B
D309	B- 5C
D310	B- 5C
D500	B- 3A
D501	B- 5A
D502	B- 5A
D503	B- 5A
D504	B- 5B
D505	B- 5B
D700	A- 3C
D701	A- 3C
D702	A- 2A
D704	A- 2D
D705	A- 2A
D706	A- 2D
D707	A- 2D
D708	A- 2A
D709	A- 2D
D710	A- 2D
D711	A- 1D
D712	B- 2A
D713	B- 2A
D714	B- 2D
D715	B- 2D
D717	A- 3B
D718	A- 2B
D720	A- 2A
D721	A- 2A
RESISTOR	
R2	B- 2B
R4	B- 2B
R6	B- 2B
R7	B- 2B
R8	B- 2B
R9	B- 3B
R10	B- 2B
R11	B- 2B
R13	B- 2B
R14	B- 3B
R15	B- 3B
R16	B- 2A

REF.NO.	LOCATION
R17	B- 2B
R19	B- 2B
R20	B- 3B
R21	B- 3B
R22	B- 3B
R23	B- 2B
R24	B- 3B
R25	B- 3B
R26	B- 3B
R27	B- 3B
R28	B- 3B
R31	B- 3B
R33	B- 3B
R35	B- 3B
R40	B- 3B
R41	B- 4B
R42	B- 3B
R45	B- 3B
R47	B- 3B
R48	B- 3B
R50	B- 4B
R51	B- 4B
R52	B- 3A
R53	B- 4B
R54	B- 3B
R55	B- 3B
R57	B- 3B
R58	B- 4A
R59	B- 4A
R60	B- 4A
R61	B- 4A
R62	B- 3A
R63	B- 4A
R64	B- 4B
R65	B- 3B
R66	B- 4B
R67	B- 4B
R68	B- 4B
R69	B- 4B
R70	B- 4B
R71	B- 4B
R72	B- 4B
R73	B- 4B
R74	B- 4B
R75	B- 4B
R76	B- 4B
R77	B- 4B
R78	B- 4B
R79	B- 4B
R80	B- 4B
R81	B- 4B
R300	B- 3C
R301	B- 3C
R302	B- 3C
R303	B- 3C
R310	B- 3C
R311	B- 3C
R312	B- 3C
R314	B- 4B
R316	B- 3C
R317	B- 3C
R318	B- 4B
R320	B- 4B
R321	B- 4B
R322	B- 4B
R324	B- 4B
R325	B- 4B
R327	B- 4B

REF.NO.	LOCATION
R329	B- 5B
R330	B- 4B
R331	B- 5B
R332	B- 5B
R334	B- 5B
R335	B- 4C
R336	B- 4C
R337	B- 5B
R338	B- 5B
R340	B- 5C
R341	B- 5C
R342	B- 4B
R343	B- 5B
R344	B- 5C
R345	B- 4B
R346	A- 4C
R348	B- 4B
R350	B- 5C
R351	B- 4C
R352	B- 4B
R353	B- 5C
R354	B- 5C
R355	B- 4B
R356	B- 5D
R357	B- 4A
R358	B- 4A
R359	B- 4A
R360	B- 4A
R362	B- 5A
R500	A- 3A
R501	A- 3A
R503	A- 4A
R504	B- 4A
R508	B- 4A
R509	A- 4A
R510	B- 4A
R512	A- 4A
R513	B- 3A
R514	B- 3A
R515	B- 4A
R516	B- 4A
R517	B- 4A
R518	B- 4A
R519	B- 4A
R520	B- 4A
R521	B- 4A
R523	B- 4A
R524	B- 4A
R525	B- 4A
R526	B- 4A
R527	B- 4A
R528	B- 4A
R529	B- 4A
R530	B- 4A
R532	B- 4A
R535	A- 3A
R536	B- 4A
R538	B- 4A
R540	B- 3A
R541	B- 3A
R542	B- 5A
R543	B- 3A
R544	B- 5A
R545	B- 5A
R546	B- 3A
R547	B- 3A
R548	B- 3A
R550	B- 5A

REF.NO.	LOCATION
R551	B- 5A
R552	B- 5A
R553	A- 3A
R554	B- 5A
R555	B- 5A
R556	B- 3A
R557	B- 5A
R558	B- 3A
R560	B- 3A
R561	B- 3A
R562	B- 5A
R563	B- 5A
R564	B- 5A
R565	B- 5A
R566	B- 5A
R567	B- 5A
R568	B- 5A
R569	B- 5A
R570	B- 5A
R571	B- 5B
R572	B- 5A
R573	B- 5B
R574	B- 5B
R575	B- 5B
R576	B- 5B
R577	B- 5B
R578	B- 5B
R579	B- 5B
R580	B- 4B
R581	B- 4B
R582	B- 4B
R583	B- 5B
R585	B- 5B
R586	B- 5B
R588	B- 5B
R592	B- 5B
R652	A- 2A
R653	A- 5A
R656	A- 2B
R657	A- 2B
R658	B- 2B
R659	B- 5B
R660	B- 2A
R661	B- 2B
R700	A- 3C
R701	A- 2A
R702	A- 2A
R703	A- 2A
R704	A- 2A
R705	A- 2A
R706	A- 1A
R707	A- 1A
R708	A- 1A
R709	A- 1A
R710	A- 1A
R711	A- 2A
R712	A- 2A
R713	A- 2A
R714	A- 2A
R715	B- 2A
R716	A- 2A
R717	A- 1A
R718	A- 3C
R720	B- 2B
R721	B- 2B
R722	A- 3C
R724	A- 3C
R727	B- 2B

REF.NO.	LOCATION
R728	B- 2B
R729	B- 2B
R730	A- 2C
R732	B- 2B
R733	B- 2A
R734	B- 3A
R736	B- 2A
R737	A- 3A
R738	B- 2A
R739	B- 2A
R740	B- 2A
R741	B- 2D
R742	B- 2A
R743	B- 2A
R744	B- 2D
R745	B- 1A
R747	B- 2A
R748	B- 2A
R749	B- 2A
R750	A- 2D
R751	A- 2C
R752	A- 2D
R755	A- 2D
R757	A- 2C
R758	B- 2A
R759	B- 2B
R760	B- 2A
R761	A- 3C
R762	A- 2C
R764	B- 2A
R765	A- 3B
R768	B- 1A
R769	A- 2D
R770	A- 2D
R771	A- 1C
R772	A- 2D
R773	A- 2D
R774	B- 2D
R775	A- 2D
R776	A- 3C
R777	B- 1A
R778	B- 2A
R779	B- 2A
R780	B- 2A
R781	B- 1A
R782	B- 2A
R783	B- 1A
R784	B- 2A
R785	B- 1A
R786	B- 2D
R789	B- 2D
R792	B- 1A
R796	B- 1A
R797	B- 1A
R798	B- 1A
R799	B- 1A
R800	B- 1A
R802	B- 1A
R804	B- 1A
R805	B- 2A
R807	B- 3B
R809	B- 5B
R811	B- 1A
R812	B- 1A
R813	B- 1B
R815	B- 1B
R816	B- 1A
R819	B- 2A

REF.NO.	LOCATION
R820	B- 2A
R821	B- 1A
R822	B- 1B
R823	B- 1A
R824	B- 2A
R825	B- 2B
R826	B- 2B
R827	B- 2A
R828	B- 2B
R829	B- 1A
R830	B- 2B
R832	B- 1A
R833	B- 2A
R835	B- 2B
R836	B- 1B
R837	B- 2B
R840	B- 2B
R843	A- 3A
R846	B- 2A
R848	B- 1A
R849	B- 2B
R850	B- 3A
R854	B- 3A
R855	A- 3B
R857	B- 3A
R858	B- 3A
R859	B- 3A
R861	B- 1B
R863	B- 2A
R864	B- 2A
R865	B- 2A
R866	A- 3B
R867	B- 2A
R868	B- 2A
R870	A- 3B
R871	A- 3B
R873	A- 2B
R875	A- 1C
R876	A- 1C
R877	A- 2B
R878	A- 2B
R879	A- 2B
R880	A- 2B
R881	A- 2B
R882	A- 2A
R883	A- 2B
R884	A- 2B
R885	A- 2B
R886	A- 2B
R888	A- 1C
R889	A- 3B
R890	A- 3B
R891	A- 1C
R892	A- 3B
R893	A- 3B
R895	A- 3B
R896	A- 3B
R897	A- 1B
R898	A- 1B
R899	A- 2B
R900	A- 2A
R901	A- 2A
R902	A- 2A
R903	A- 2A
R904	A- 2B
R905	A- 3A
R906	A- 2A

REF.NO.	LOCATION
R907	B- 2A
R908	B- 2A
R909	B- 2A
R910	A- 2A
R911	A- 2A
R912	B- 2A
R913	A- 2A
R914	A- 3A
R916	A- 2A
R917	A- 3A
R918	A- 3A
R919	A- 3A
R920	A- 3A
R921	A- 2B
R922	A- 2B
R923	A- 2B
R924	A- 2B
R925	A- 2B
R926	A- 2A
R927	A- 2A
R928	A- 2A
R929	A- 2B
R930	A- 2B
R931	A- 2B
R933	A- 2B
R934	A- 1A
R936	B- 2A
R938	A- 2B
R939	A- 2B
R940	A- 1C
R942	A- 1C
R943	A- 1C
R944	A- 1B
R946	A- 1C
R947	A- 1C
R948	A- 3B
R949	A- 2B
R950	A- 1B
R951	A- 1B
R952	A- 1B
R953	A- 1B
R954	A- 3B
R955	A- 1B
R956	A- 1B
R958	A- 2C
R959	A- 2C
R960	A- 1C
R961	A- 1C
R962	A- 1B
R964	B- 2D
R965	A- 1C
R966	B- 1D
R968	A- 3B
R969	A- 3B
R970	A- 3B
R971	A- 3A
R972	A- 3A
R973	B- 2A
R974	A- 1A
R975	A- 2A
R976	A- 2A
R977	A- 1A
R978	A- 2B
R979	A- 2A
R980	A- 5B
R981	A- 5B
R983	A- 5B
R984	B- 2A

REF.NO.	LOCATION
R985	B- 2B
R986	A- 3B
R987	A- 2B
R988	A- 2B
R989	A- 2B
R990	A- 2A
R991	B- 2A
R992	B- 2A
R993	B- 1B
R994	A- 2A
R996	A- 2C
R997	B- 2B
R998	B- 2B
R999	B- 2B
CAPACITOR	
C7	B- 3B
C9	B- 2B
C10	B- 3B
C12	B- 3B
C13	B- 3B
C14	B- 3B
C15	B- 3B
C16	B- 3B
C17	B- 2B
C18	B- 3B
C19	B- 3B
C21	B- 3B
C22	B- 3B
C23	B- 2B
C24	B- 2B
C25	B- 3B
C26	B- 3B
C27	B- 3B
C28	B- 3B
C29	B- 3B
C31	B- 3B
C32	B- 3B
C34	B- 3B
C35	B- 3B
C36	B- 3B
C38	B- 3B
C46	B- 3B
C48	B- 4B
C49	B- 4B
C50	B- 3B
C51	B- 4B
C52	B- 4B
C53	B- 3B
C58	B- 4B
C60	B- 4B
C61	B- 4B
C63	B- 3A
C64	B- 3B
C65	B- 4B
C67	B- 3B
C69	B- 4A
C70	B- 3B
C73	B- 4A
C74	B- 4A
C75	B- 3A
C78	B- 4A
C79	B- 4B
C80	B- 4B
C81	B- 4B
C82	B- 3B
C83	B- 3B
C84	B- 4B

REF.NO.	LOCATION
C85	B- 4B
C86	B- 4B
C87	B- 3B
C88	B- 4B
C89	B- 4B
C90	B- 3B
C91	B- 4B
C92	B- 4B
C93	B- 4B
C94	B- 4B
C95	B- 4B
C96	B- 4B
C97	B- 4B
C98	B- 3B
C99	B- 4B
C100	B- 4B
C101	B- 4B
C102	B- 4B
C103	B- 4B
C104	B- 4B
C105	B- 4B
C106	B- 4B
C107	B- 4B
C108	B- 4B
C300	B- 3C
C301	B- 3C
C302	B- 3C
C303	B- 3C
C304	B- 3C
C305	B- 3C
C306	B- 3C
C309	B- 3C
C310	B- 3C
C311	B- 3C
C312	B- 3C
C313	B- 3C
C314	B- 4C
C315	B- 4C
C320	B- 3C
C323	A- 3C
C324	B- 4B
C325	A- 4C
C326	A- 3C
C327	A- 4C
C328	A- 3C
C329	B- 4B
C330	A- 4C
C332	B- 3C
C333	B- 3C
C334	B- 3C
C335	B- 4C
C336	B- 4C
C339	B- 5B
C340	B- 5B
C343	B- 5C
C344	A- 4C
C346	A- 4C
C347	B- 5C
C348	B- 4B
C349	A- 4C
C350	A- 4C
C351	B- 5C
C352	B- 5C
C353	B- 5C
C354	B- 5C
C355	B- 5C
C356	B- 4B
C357	B- 5C

REF.NO.	LOCATION
C358	A- 4C
C359	B- 5D
C360	B- 5D
C361	B- 5D
C363	B- 5D
C364	B- 5D
C365	B- 5C
C366	B- 3C
C367	B- 4A
C368	B- 4A
C369	B- 4A
C370	B- 4A
C371	B- 4A
C372	B- 4A
C374	B- 4A
C375	B- 4B
C376	B- 4A
C500	B- 4A
C502	A- 3A
C503	B- 4A
C504	A- 3A
C505	B- 4A
C506	A- 4A
C507	B- 3A
C508	B- 4A
C509	B- 4A
C510	B- 3A
C511	B- 3A
C512	B- 3A
C513	B- 3A
C514	B- 4A
C515	B- 4A
C516	B- 4A
C517	B- 3A
C518	B- 4A
C519	B- 3A
C520	B- 4A
C521	B- 4A
C522	B- 4A
C525	B- 4A
C527	B- 4A
C528	B- 3A
C529	B- 4A
C530	B- 4A
C531	B- 4A
C532	B- 4A
C534	B- 4A
C535	B- 4A
C536	A- 3A
C537	B- 4A
C538	B- 4A
C539	B- 4A
C540	A- 3A
C541	B- 4A
C542	B- 3A
C543	B- 4A
C544	B- 3A
C545	B- 5A
C546	B- 3A
C547	B- 3A
C548	B- 3A
C549	B- 5A
C550	B- 5A
C551	B- 5A
C552	B- 5A
C553	B- 5A
C555	B- 5A
C556	B- 3A

REF.NO.	LOCATION
C557	B- 5A
C558	B- 5A
C559	B- 5A
C560	B- 5A
C561	B- 5A
C562	B- 5A
C564	B- 5A
C565	B- 5A
C566	B- 5A
C567	B- 5A
C568	B- 5A
C569	B- 5A
C570	B- 5A
C571	B- 5A
C572	B- 5A
C573	B- 5A
C574	B- 5A
C575	B- 5A
C576	B- 5A
C577	B- 5A
C579	B- 5B
C580	B- 5A
C582	B- 5B
C583	B- 5B
C584	B- 5B
C585	B- 5B
C586	B- 4B
C587	B- 5B
C588	B- 4B
C589	B- 5B
C590	B- 5B
C591	B- 5B
C592	B- 5B
C595	B- 5B
C596	B- 5B
C597	B- 5B
C599	B- 5B
C600	B- 5B
C601	B- 5B
C602	B- 5B
C700	A- 3A
C701	A- 3A
C702	B- 2A
C703	B- 2B
C704	A- 3A
C705	A- 1A
C706	A- 3A
C707	A- 1A
C708	A- 4A
C709	A- 4B
C710	A- 3C
C711	A- 1A
C712	A- 4B
C713	A- 1A
C714	B- 2B
C715	A- 3C
C716	A- 3B
C717	A- 1A
C718	A- 3B
C719	A- 1A
C720	A- 2D
C721	A- 2D
C722	B- 1A
C723	A- 2D
C725	A- 2D
C727	A- 1D
C729	A- 1D
C731	A- 2A

REF.NO.	LOCATION
C733	A- 2A
C735	B- 2B
C736	B- 2A
C737	B- 1A
C738	B- 2A
C740	B- 2C
C741	B- 2A
C742	B- 2A
C743	B- 1A
C744	B- 2A
C745	B- 2D
C746	B- 2A
C747	B- 2C
C748	B- 2C
C749	B- 2C
C750	B- 2C
C751	B- 2A
C752	B- 2B
C753	B- 2A
C754	B- 2A
C755	B- 2A
C757	B- 2B
C758	B- 1A
C759	B- 2A
C760	B- 2A
C761	B- 1A
C764	B- 1A
C765	B- 1D
C766	B- 2D
C767	B- 2D
C768	B- 2D
C769	B- 2D
C770	B- 2D
C771	B- 2D
C772	B- 2D
C773	B- 2D
C774	B- 2D
C775	B- 2D
C780	B- 1A
C781	B- 1A
C783	B- 1A
C784	B- 1B
C786	B- 1B
C789	B- 1A
C790	B- 1B
C791	B- 3B
C793	B- 1A
C794	B- 1A
C796	B- 1B
C798	B- 2A
C800	B- 2B
C801	B- 2B
C802	B- 2B
C803	B- 1A
C806	B- 2A
C807	B- 2A
C809	B- 2A
C810	B- 1B
C815	B- 2B
C816	B- 1B
C817	B- 2B
C818	B- 1B
C820	A- 3A
C829	B- 3A
C831	A- 3A
C832	B- 2A
C833	B- 2A
C835	B- 1B

REF.NO.	LOCATION
C837	B- 2A
C841	A- 3B
C842	A- 2B
C843	A- 2B
C844	A- 2B
C845	A- 2B
C846	A- 2B
C847	A- 2B
C848	A- 2B
C849	A- 1C
C850	A- 2B
C851	A- 2B
C852	A- 3B
C853	A- 3B
C855	A- 3B
C856	A- 3B
C857	A- 3B
C858	A- 3B
C859	A- 2C
C860	A- 2A
C861	A- 2B
C862	A- 2B
C863	A- 2B
C865	A- 3B
C867	A- 3A
C868	A- 2A
C869	A- 2A
C870	B- 2A
C871	B- 2A
C872	B- 2A
C873	B- 2A
C874	A- 3A
C875	B- 2A
C876	A- 1A
C878	A- 2A
C879	A- 2A
C880	A- 2A
C881	A- 3A
C882	A- 2A
C883	A- 2A
C884	A- 3A
C885	A- 2A
C886	A- 2A
C887	A- 2B
C890	A- 1C
C891	A- 1C
C892	A- 1C
C894	A- 1B
C897	A- 2B
C898	A- 1B
C899	A- 1B
C900	A- 1B
C902	A- 2B
C903	A- 1C
C904	A- 3B
C905	A- 1C
C908	A- 2B
C909	A- 2C
C911	A- 1B
C912	A- 1C
C913	A- 1B
C914	B- 1C
C916	A- 1B
C919	A- 1C
C920	A- 1C
C921	B- 2C
C922	A- 2C
C923	A- 2B

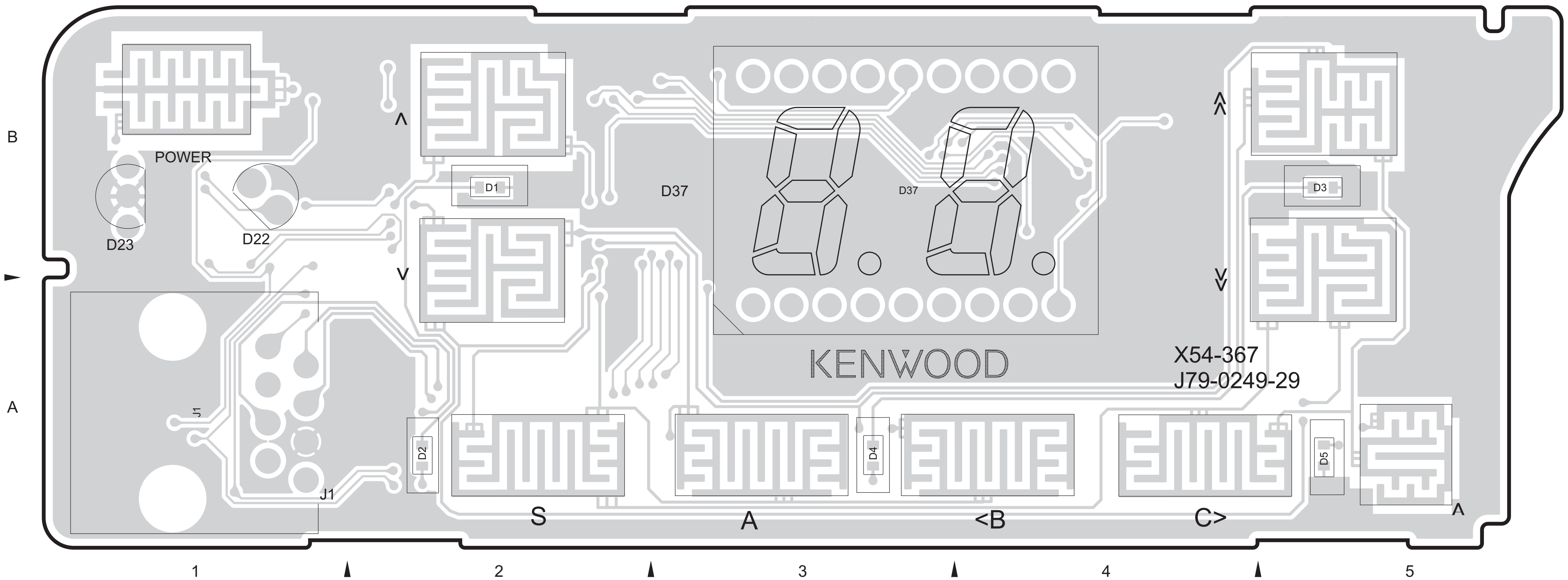
REF.NO.	LOCATION
C924	B- 2C
C925	A- 1B
C926	A- 1D
C927	A- 2C
C928	B- 1B
C929	A- 2B
C930	A- 1C
C931	A- 2C
C933	B- 1C
C934	A- 1C
C935	A- 2B
C936	B- 1C
C937	A- 1C
C938	B- 2C
C939	A- 2C
C940	B- 2C
C941	A- 1D
C942	A- 3B
C944	A- 2C
C945	A- 3B
C947	B- 1D
C948	A- 3B
C949	A- 1D
C950	B- 1D
C951	A- 1D
C952	B- 1D
C954	A- 1C
C955	B- 1D
C956	A- 1D
C957	A- 2C
C958	A- 1D
C959	A- 2C
C960	A- 2C
C961	A- 3A
C962	A- 1D
C963	A- 2C
C965	B- 1D
C966	B- 2C
C967	A- 2C
C968	B- 2C
C969	A- 2C
C970	B- 2C
C971	A- 2C
C973	A- 2A
C974	A- 2A
C976	B- 1A
C977	B- 1B
C978	B- 2A
C979	B- 2C
C980	B- 3C
C981	B- 3B
C982	B- 3C
C983	B- 3C
C987	B- 2D
C988	B- 2B
C989	B- 2C
C990	A- 3B
C991	B- 1D
C992	B- 2D
C993	B- 5B
OTHER	
X1	B- 2B
X700	A- 3A
TH301	A- 4C
TH302	B- 5D
TH303	B- 5C

REF.NO.	LOCATION
TH502	B- 3A
CN700	A- 1A
CP1	B- 3B
CP701	B- 2B
CP702	B- 2B
CP703	B- 2B
CP704	B- 2B
CP705	A- 3B
CP706	B- 2A
CP707	B- 2A
CP708	B- 2B
F700	A- 1D
F701	A- 1D
F702	A- 1B
F703	A- 1C
F704	B- 2B
J700	A- 2D
J701	A- 1D
L1	B- 2B
L2	B- 2B
L4	B- 3B
L7	B- 4B
L8	B- 4B
L9	B- 3B
L10	B- 3B
L11	B- 4B
L12	B- 4B
L14	B- 3A
L15	B- 3A
L16	B- 3A
L18	B- 4A
L19	B- 3A
L20	B- 4A
L21	B- 3A
L22	B- 4A
L23	B- 4A
L24	B- 3B
L25	B- 4A
L26	B- 3B
L27	B- 4B
L28	B- 4A
L29	B- 4B
L30	B- 4A
L31	B- 4B
L32	B- 4A
L33	B- 4B
L34	B- 4A
L36	B- 4B
L37	B- 4B
L38	B- 4B
L39	B- 3B
L40	B- 4B
L41	B- 4B
L300	B- 3C
L301	B- 3C
L302	B- 3C
L303	B- 3C
L304	B- 3C
L305	B- 3C
L307	A- 4C
L308	A- 4C
L309	A- 4C
L311	B- 4C

REF.NO.	LOCATION
L315	B- 5D
L316	B- 4A
L317	B- 4A
L318	B- 4A
L500	B- 3A
L501	B- 3A
L502	B- 4A
L503	B- 5A
L504	B- 5A
L506	B- 5A
L507	B- 5A
L508	B- 5A
L509	B- 5A
L510	B- 5A
L512	B- 5B
L513	B- 5B
L514	B- 5B
L516	B- 5B
L517	B- 5B
L700	A- 1A
L701	A- 1A
L702	A- 1A
L703	A- 1A
L704	A- 1A
L705	B- 2A
L706	A- 3B
L707	A- 3B
L709	A- 2B
L710	B- 4A
XF500	B- 4A

■ DISPLAY UNIT (X54-3890-20)

--- Component side view (J79-0249-29) ---



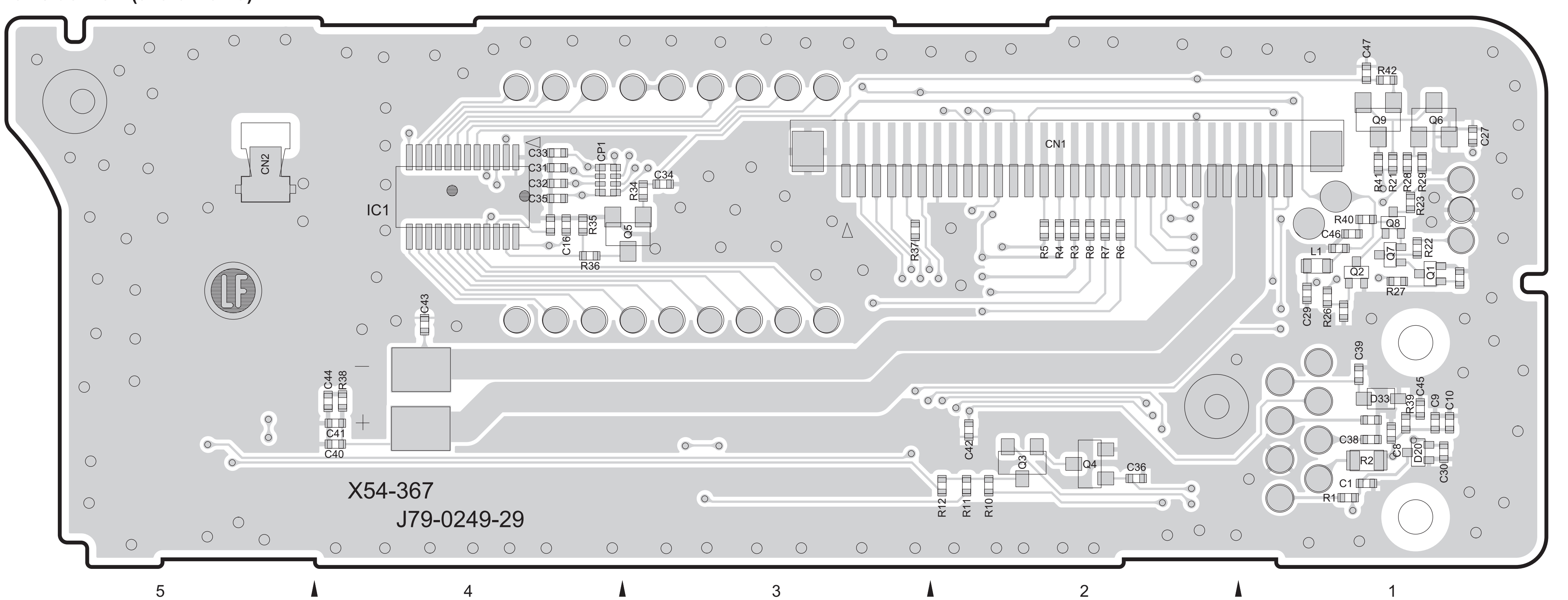
● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

A-1C
Side — X axis — Y axis

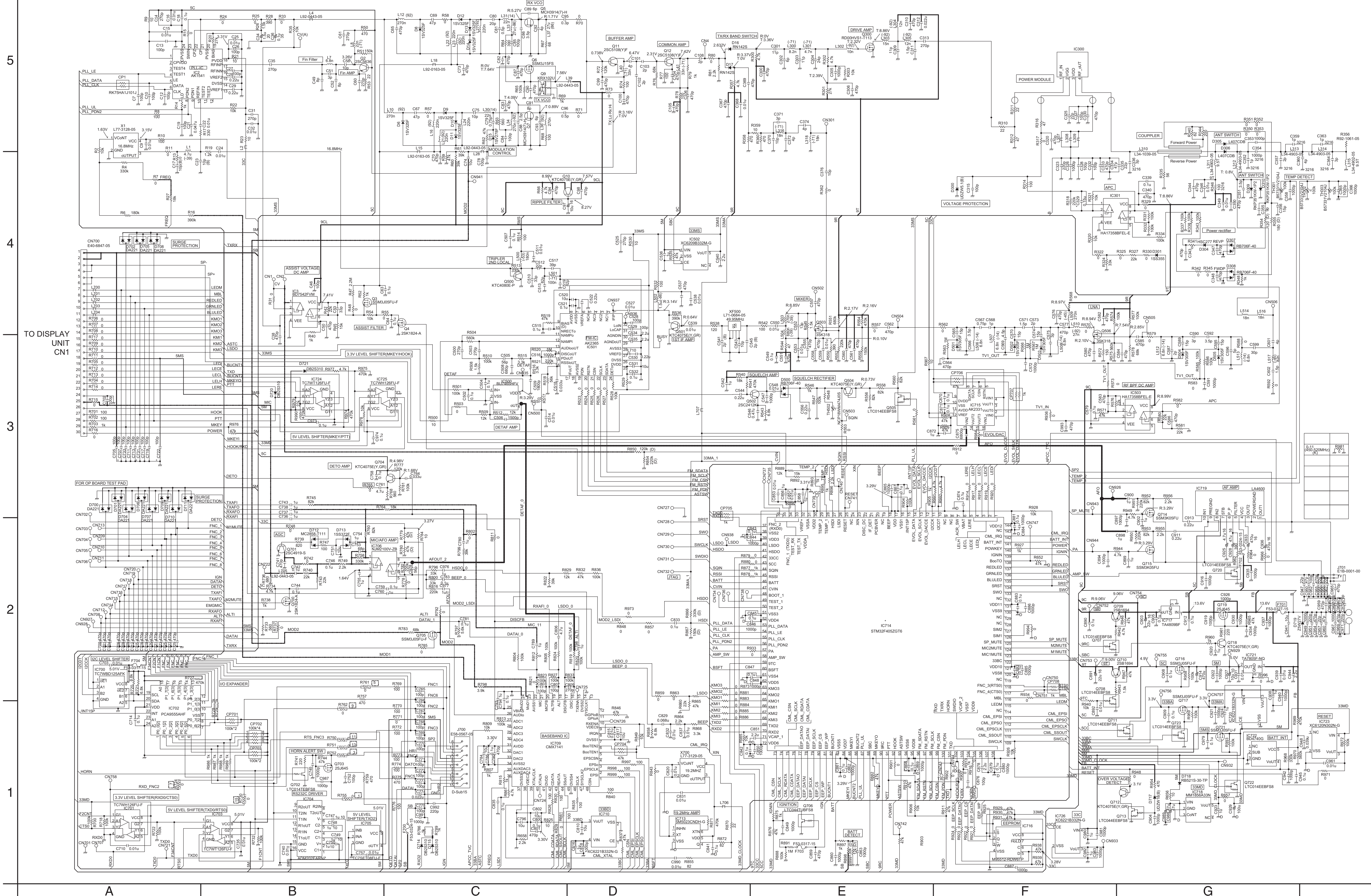
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
IC		R8	B- 2B	C30	B- 1A
IC1	B- 4B	R10	B- 2A	C31	B- 4B
		R11	B- 2A	C32	B- 4B
TRANSISTOR		R12	B- 2A	C33	B- 4B
Q1	B- 1B	R21	B- 1B	C34	B- 3B
Q2	B- 1B	R22	B- 1B	C35	B- 4B
Q3	B- 2A	R23	B- 1B	C36	B- 2A
Q4	B- 2A	R26	B- 1A	C38	B- 1A
Q5	B- 3B	R27	B- 1B	C39	B- 1A
Q6	B- 1B	R28	B- 1B	C40	B- 4A
Q7	B- 1B	R29	B- 1B	C41	B- 4A
Q8	B- 1B	R34	B- 3B	C42	B- 2A
Q9	B- 1B	R35	B- 4B	C43	B- 4A
		R36	B- 4B	C44	B- 4A
DIODE		R37	B- 3B	C45	B- 1A
D20	B- 1A	R38	B- 4A	C46	B- 1B
D22	B- 1B	R39	B- 1A	C47	B- 1B
D23	B- 1B	R40	B- 1B		
D33	B- 1A	R41	B- 1B	**OTHER**	
D37	A- 3B	R42	B- 1B	CN1	B- 2B
				CN2	B- 5B
RESISTOR		**CAPACITOR**			
R1	B- 1A	C1	B- 1A	CP1	B- 4B
R2	B- 1A	C8	B- 1A		
R3	B- 2B	C9	B- 1A	J1	A- 1A
R4	B- 2B	C10	B- 1A		
R5	B- 2B	C16	B- 4B	L1	B- 1B
R6	B- 2B	C27	B- 1B		
R7	B- 2B	C29	B- 1A		

--- Foil side view (J79-0249-29) ---



SCHEMATIC DIAGRAM

■ TX-RX UNIT (1/2) (XC1-0010-11 (NX-840H(K), NX-840H(U)(K)), XC1-0010-22 (NX-840(M))



■ TX-RX UNIT (2/2) (XC1-0010-11 (NX-840H(K), NX-840H(U)(K)), XC1-0010-22 (NX-840(M))

		D5	D6	D7	D8	D309	D310	D501	L7	L8	L9	L10	L11	L12	L14	L16	L19	L20	L21	L22	L23	L24	L25	L26	L27	L29	L30	L31	L32	L34	L36	L38	L40	L41	L300	L301	L302	L303	L304	L305	L310	L312	L313	L314	L316	L317	L318	L503	L504	L506	L507
UHF(K) 450-520M	0-11	-	1SV325F	-	1SV325F	RKP351KW-1P2	RKP351KW-1P2	1SV305F	6.8n	22n	-	270n	-	270n	-	220n	-	-	220n	220n	220n	220n	-	-	220n	-	22n	22n	-	270n	270n	-	33n	33n	8.2n	4.7n	10n	15n	12n	12n	L34-1039-05	L34-1039-05	L34-1113-05	L34-1113-05	18n	-	18n	270n	680n	6.8n	6.8n
UHF(M) 450-520M	0-22	-	1SV325F	-	1SV325F	RKP351KW-1P2	RKP351KW-1P2	1SV305F	6.8n	22n	-	270n	-	270n	-	220n	-	-	220n	220n	220n	220n	-	-	220n	-	22n	22n	-	270n	270n	-	33n	33n	8.2n	4.7n	10n	15n	12n	12n	L34-1039-05	L34-1039-05	L34-1113-05	L34-1113-05	18n	-	18n	270n	680n	6.8n	6.8n

		L508	L509	L510	L512	L513	L514	L516	L517	L709	R6	R16	R26	R27	R41	R47	R51	R53	R59	R61	R63	R67	R68	R72	R75	R76	R79	R310	R311	R312	R318	R324	R327	R335	R336	R340	R344	R358	R359	R360	R504	R508	R536	R545	R546	R548	R550	R554	R563	R564	R565
UHF(K) 450-520M	0-11	6.8n	270n	27n	6.8n	6.8n	18n	18n	82n	-	180k	390k	1.5k	18k	-	2.2M	150k	22	47k	39k	560	68	100	120k	-	68k	1k	22	22	47	220k	33k	22k	56	-	82	200	470	10	470	560k	1.5k	390k	1.5k	1k	270k	390	470k	1M	-	-
UHF(M) 450-520M	0-22	6.8n	270n	27n	6.8n	6.8n	18n	18n	82n	-	180k	390k	1.5k	18k	-	2.2M	150k	22	47k	39k	560	68	100	120k	-	68k	1k	22	22	47	220k	33k	22k	56	-	82	200	470	10	470	560k	1.5k	390k	1.5k	1k	270k	390	470k	1M	-	-

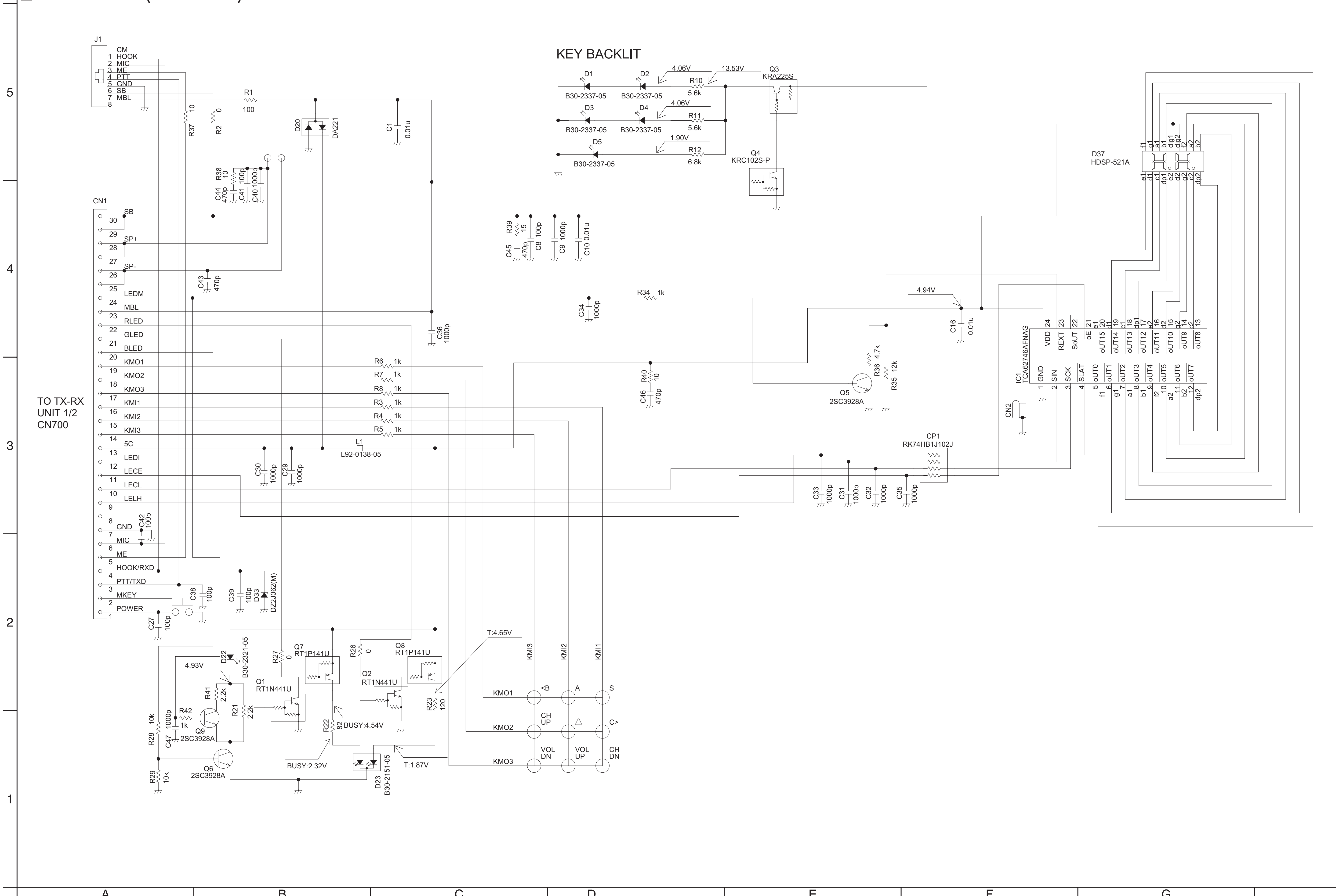
		R566	R567	R569	R570	R571	R572	R585	R586	R592	R653	R657	R659	R783	R798	R829	R980	R981	R983	R994	C35	C46	C48	C49	C51	C52	C58	C60	C61	C65	C69	C70	C73	C75	C80	C81	C82	C83	C84	C85	C86	C87	C88	C90	C92	C95	C96	C99	C100	C101	C102
UHF(K) 450-520M	0-11	1M	1M	-	0	47k	150	100k	100k	0	-	0	-	68k	3.9k	12k	-	0	-	0	270p	100p	-	8p	3p	8p	10p	270p	270p	470p	47p	470p	470p	10p	20p	0.5p	470p	470p	100p	100p	3.5p	470p	2.5p	470p	4p	0.3p	0.5p	470p	470p	4p	2p
UHF(M) 450-520M	0-22	1M	1M	-	0	47k	150	100k	100k	0	0	0	-	68k	3.9k	12k	-	-	-	-	270p	100p	-	8p	3p	8p	10p	270p	270p	470p	47p	470p	470p	10p	20p	0.5p	470p	470p	100p	100p	3.5p	470p	2.5p	470p	4p	0.3p	0.5p	470p	470p	4p	2p

		C103	C104	C105	C106	C107	C108	C300	C301	C302	C303	C304	C309	C310	C311	C313	C314	C315	C324	C329	C330	C332	C336	C340	C343	C344	C347	C348	C350	C351	C352	C355	C356	C357	C359	C360	C361	C363	C364	C367	C370	C371	C372	C374	C375	C376	C534	C535	C537	C538	C542
UHF(K) 450-520M	0-11	2p	470p	470p	470p	-	2p	470p	11p	6p	11p	24p	11p	470p	1.5p	270p	-	100p	-	0.15u	470p	100p	3p	470p	470p	470p	470p	470p	470p	3.5p	1p	9p	15p	2p	1p	4p	-	1p	3p	470p	10p	3p	4p	4p	-	10p	2.2u	2.2u	470p	0.01u	1u
UHF(M) 450-520M	0-22	2p	470p	470p	470p	-	2p	470p	11p	6p	11p	24p	11p	470p	1.5p	270p	-	100p	-	0.15u	470p	100p	3p	470p	470p	470p	470p	470p	470p	3.5p	1p	9p	15p	2p	1p	4p	-	1p	3p	470p	10p	3p	4p	4p	-	10p	2.2u	2.2u	470p	0.01u	1u

		C551	C552	C555	C558	C560	C561	C562	C564	C565	C566	C567	C568	C569	C570	C571	C573	C574	C575	C576	C580	C582	C584	C587	C588	C589	C590	C592	C595	C596	C597	C599	C600	C601	C602	C705	C707	C711	C713	C717	C719	C722	C731	C753	C791	C852	C855	C873	C955	C959	C963
UHF(K) 450-520M	0-11	470p	13p	470p	470p	470p	470p	470p	470p	15p	3.5p	0.75p	1p	4.5p	15p	1.5p	2p	15p	3p	470p	470p	470p	470p	2p	-	15p	3p	3.5p	15p	5p	-	30p	-	4p	1.5p	100p	100p	100p	100p	100p	100p	100p	100p	68p	-	-	-	-	470p	470p	470p
UHF(M) 450-520M	0-22	470p	13p	470p	470p	470p	470p	470p	470p	15p	3.5p	0.75p	1p	4.5p	15p	1.5p	2p	15p	3p	470p	470p	470p	470p	2p	-	15p	3p	3.5p	15p	5p	-	30p	-	4p	1.5p	100p	100p	100p	100p	100p	100p	100p	100p	68p	-	-	-	-	470p	470p	470p

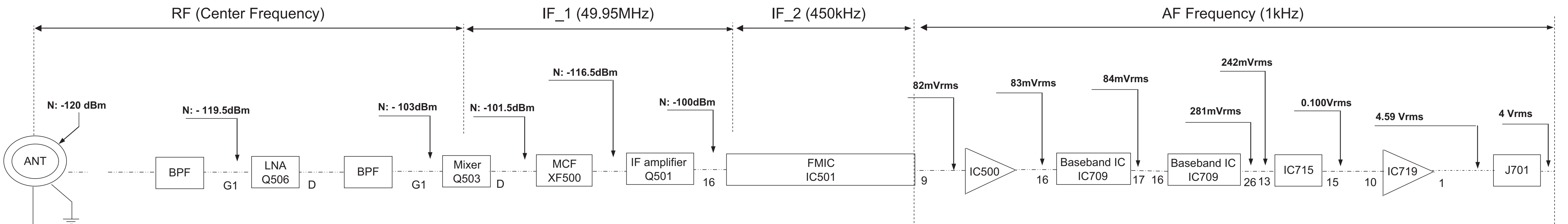
		C965	C966	C968	C970	C991	C992	C993
UHF(K) 450-520M	0-11	470p	100p	47p	470p	1000p	220p	470p
UHF(M) 450-520M	0-22	470p	100p	47p	470p	1000p	220p	470p

■ DISPLAY UNIT (X54-3890-20)



LEVEL DIAGRAM

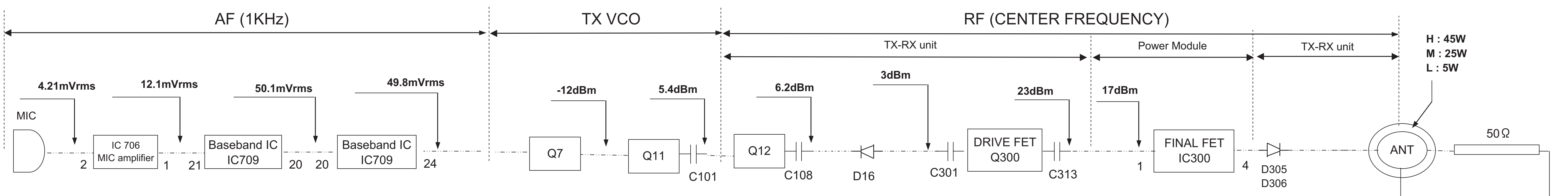
■ Receiver Section



To make measurements in the RF section, connect the RF level meter.
In the RF section, use a 0.01uF coupling capacitor.
(The display shows the SSG input value required to obtain 12dB SINAD.)

To make measurement in the AF section, connect the AC level meter.
(ANT input: -53dBm, AF 1kHz FM,Dev 1.5kHz
The AF output level is adjusted near 4.0Vrms / 4ohm by adjust VOL key.

■ Transmitter Section



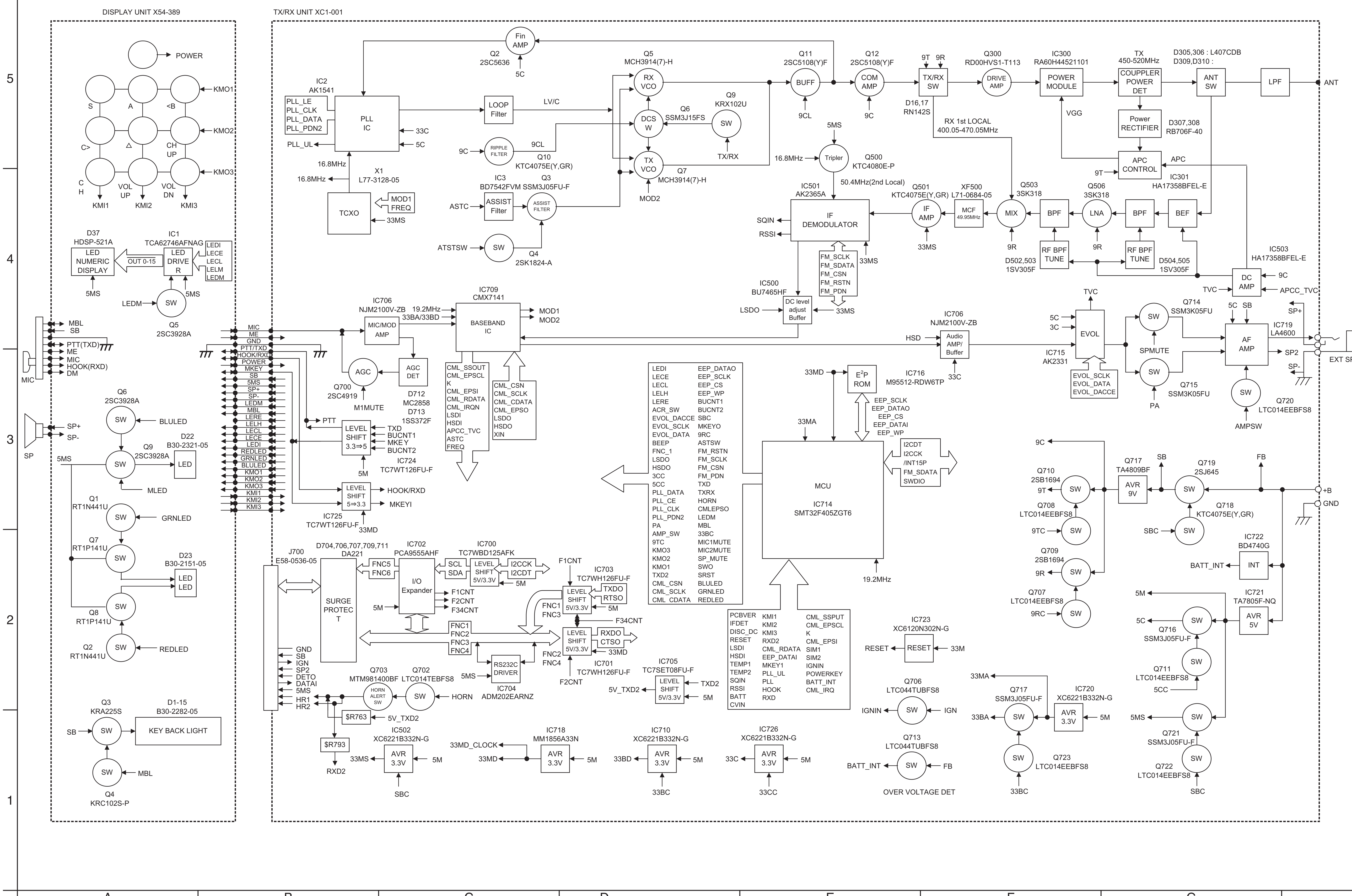
To make measurements in the AF section, connect the AC level meter.
AG is set so that MIC input becomes 1.5kHz (Narrow) DEV at AF :1kHz .

To make measurements in the RF section, connect the RF Wattmeter (50ohm).
In the RF section, use a 1000pF coupling capacitor.

5 4 3 2 1

A B C D E F G

BLOCK DIAGRAM



MEMO

PARTS LIST

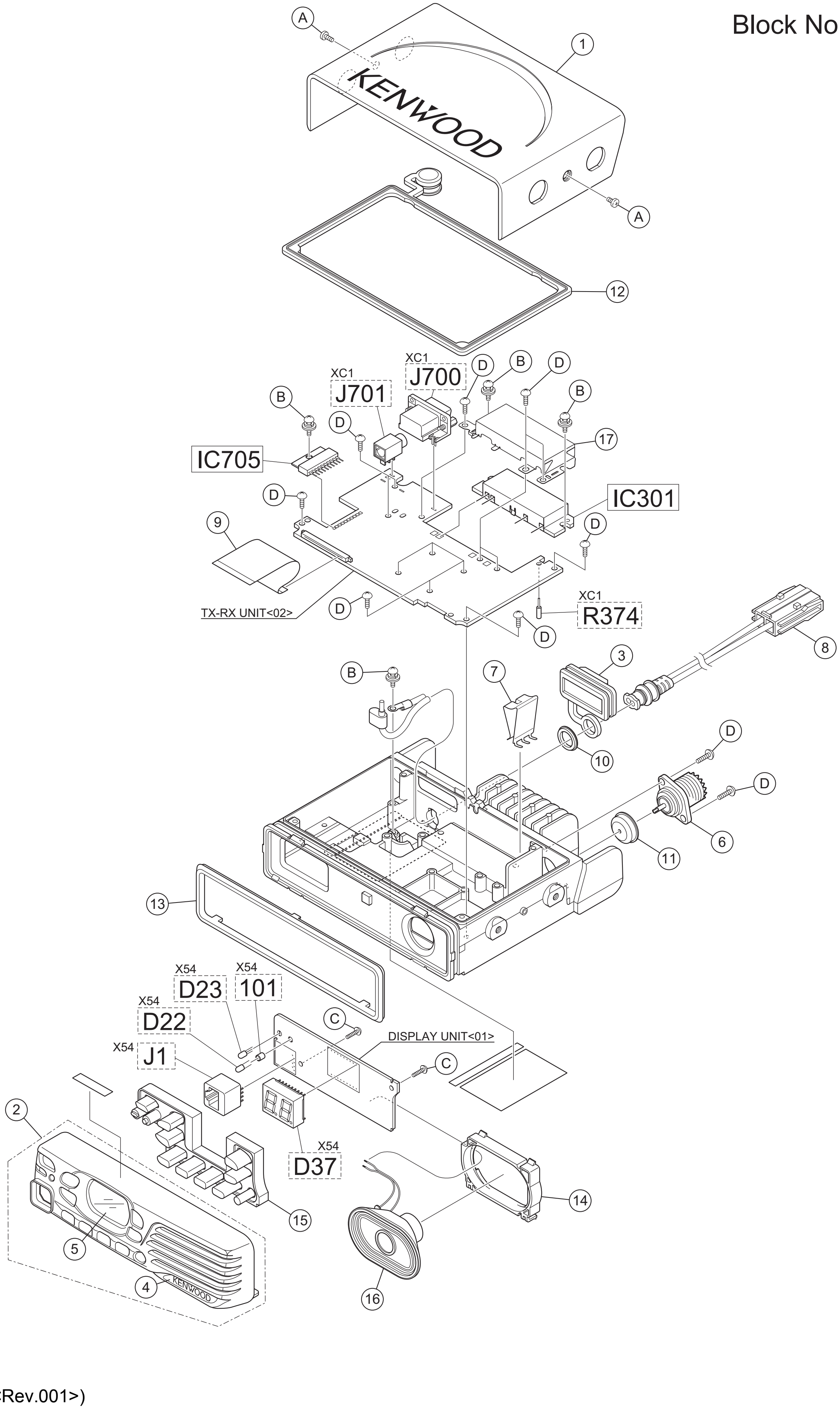
[NX-840H,NX-840H(U),NX-840]

* SAFETY PRECAUTION
  Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.
* BEWARE OF BOGUS PARTS
  Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine parts be used.
* (x_) in a description column shows the number of the used part.

- Contents -

Exploded view of general assembly and parts list

Block No.M1MM



General assembly

Block No. [M][1][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	A02-4073-21	PLASTIC CABINET		
2	A6A-0004-00	PANEL ASSY		
3	B09-0732-03	CAP(D-SUB)		
4	B4D-0003-00	BADGE		
5	B10-2794-03	FRONT GLASS		
6	E04-0167-15	RF COAXIAL RECEPTACLE(M)		
7	E23-1346-04	GROUND TERMINAL		
8	E30-7684-25	DC CORD		
9	E37-1461-05	FLAT CABLE(30P PANEL)		
10	G53-1643-04	PACKING(DC CORD)		
11	G53-1662-04	PACKING(RECEPTACLE)		
12	G53-1819-21	PACKING(CHASSIS)		
13	G53-1820-03	PACKING(PANEL)		
14	J19-5528-03	HOLDER(SPEAKER)		
15	K29-9448-01	KEY TOP		
16	T07-0785-15	SPEAKER		
17	F10-3140-13	SHIELD CASE		
A	N35-2604-43	BINDING HEAD MACHINE SCREW	(x2)	
B	N67-3008-48	PAN HEAD SEMS SCREW	(x4)	
C	N80-2008-48	PAN HEAD TAPTITE SCREW	(x2)	
D	N87-2608-48	BRAZIER HEAD TAPTITE SCREW	(x14)	
-	XC2-0020-10	SERVICE TX-RX UNIT		HK
-	XC2-0020-11	SERVICE TX-RX UNIT		HUK
-	XC2-0020-21	SERVICE TX-RX UNIT		M

Electrical parts list

DISPLAY UNIT

X54-3890-20

Block No. [0][1]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC1	TC62D748CFNAG	MOS-IC		
Q1	LTC044EEBFS8	TRANSISTOR		
Q2	LTC044EEBFS8	TRANSISTOR		
Q3	KRA225S	TRANSISTOR		
Q4	KRC102S-P	TRANSISTOR		
Q5	2SC3928A	TRANSISTOR		
Q6	2SC3928A	TRANSISTOR		
Q7	LTA014EEBFS8	TRANSISTOR		
Q8	LTA014EEBFS8	TRANSISTOR		
Q9	2SC3928A	TRANSISTOR		
D1	B30-2337-05	LED	(YELLOW)	
D2	B30-2337-05	LED	(YELLOW)	
D3	B30-2337-05	LED	(YELLOW)	
D4	B30-2337-05	LED	(YELLOW)	
D5	B30-2337-05	LED	(YELLOW)	
D20	DA221	DIODE		
D22	B30-2321-05	LED	(BLUE LED)	
D23	B30-2151-05	LED	(RED/GREEN)	
D33	DZ2J062(M)	ZENER DIODE		
D37	HDSP-521A	LED		
C1	CK73HB1E103K	C CAPACITOR	0.010UF K	
C8	CC73HCH1H101J	C CAPACITOR	100PF J	
C9	CK73HB1H102K	C CAPACITOR	1000PF K	
C10	CK73HB1E103K	C CAPACITOR	0.010UF K	
C16	CK73HB1E103K	C CAPACITOR	0.010UF K	
C27	CC73HCH1H101J	C CAPACITOR	100PF J	
C29	CK73HB1H102K	C CAPACITOR	1000PF K	
C30	CK73HB1H102K	C CAPACITOR	1000PF K	
C31	CK73HB1H102K	C CAPACITOR	1000PF K	
C32	CK73HB1H102K	C CAPACITOR	1000PF K	
C33	CK73HB1H102K	C CAPACITOR	1000PF K	
C34	CK73HB1H102K	C CAPACITOR	1000PF K	
C35	CK73HB1H102K	C CAPACITOR	1000PF K	
C36	CK73HB1H102K	C CAPACITOR	1000PF K	
C38	CC73HCH1H101J	C CAPACITOR	100PF J	
C39	CC73HCH1H101J	C CAPACITOR	100PF J	
C40	CK73HB1H102K	C CAPACITOR	1000PF K	
C41	CC73HCH1H101J	C CAPACITOR	100PF J	
C42	CC73HCH1H101J	C CAPACITOR	100PF J	
C43	CK73HB1H471K	C CAPACITOR	470PF K	
C44	CK73HB1H471K	C CAPACITOR	470PF K	
C45	CK73HB1H471K	C CAPACITOR	470PF K	
C46	CK73HB1H471K	C CAPACITOR	470PF K	
C47	CK73HB1H102K	C CAPACITOR	1000PF K	
R1	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R2	RK73FB2B000J	MG RESISTOR	0.0 J 1/8W	
R3	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R4	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R5	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R6	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R7	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R8	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R10	RK73HB1J562J	MG RESISTOR	5.6K J 1/16W	
R11	RK73HB1J562J	MG RESISTOR	5.6K J 1/16W	
R12	RK73HB1J682J	MG RESISTOR	6.8K J 1/16W	
R21	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R22	RK73HB1J820J	MG RESISTOR	82 J 1/16W	
R23	RK73HB1J121J	MG RESISTOR	120 J 1/16W	
R26	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R27	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R28	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R29	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R34	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R35	RK73HB1J123J	MG RESISTOR	12K J 1/16W	
R36	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R37	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R38	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R39	RK73HB1J150J	MG RESISTOR	15 J 1/16W	
R40	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R41	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R42	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
L1	L92-0138-05	CHIP FERRITE		
101	J31-0565-15	COLLAR		
CN1	E40-6851-05	FLAT CABLE CONNECTOR		
CN2	E23-1262-05	TERMINAL		
CP1	RK74HB1J102J	CHIP-COM	1.0K J 1/16W	
J1	J1	MODULAR JACK		

TX-RX UNIT

XC1-0010-11 (NX-840H(K), NX-840H(U)(K))

XC1-0010-22 (NX-840(M))

Block No. [0][2]

⚠ Symbol No.	Part No.	Part Name	Description	Local
IC2	AK1541	MOS-IC		
IC3	BD7542FVM	MOS-IC		
IC300	RA60H44521101	MOS-IC	(POWER MODULE)	
IC301	HA17358BFEL-E	MOS-IC		
IC500	BU7465HFV	MOS-IC		
IC501	AK2365A	FM-IC		
IC502	XC6209B332M-G	MOS-IC		
IC503	HA17358BFEL-E	MOS-IC		
IC700	TC7WBD125AFK	MOS-IC		
IC701	TC7WH126FU-F	MOS-IC		
IC702	PCA9555AHF	MOS-IC		
IC703	TC7WT126FU-F	MOS-IC		
IC704	ADM202EARNZ	MOS-IC		
IC705	TC7SET08FU-F	MOS-IC		
IC706	NJM2100V-ZB	BI-POLAR IC		
IC709	CMX7141	MOS-IC		
IC710	XC6221B332N-G	MOS-IC		
IC713	SM5023CNDH-G	MOS-IC		
IC714	2F405ZGT6KFKA	MCU		
IC715	AK2331	MOS-IC		
IC716	M95512-RDW6TP	ROM IC		
IC717	TA4809BF	ANALOGUE IC		
IC718	MM1856A33N	BI-POLAR IC		
IC719	LA4600	BI-POLAR IC		
IC720	XC6221B332N-G	MOS-IC		
IC721	TA7805F-NQ	MOS-IC		
IC722	BD4740G	MOS-IC		
IC723	XC6120N302N-G	MOS-IC		
IC724	TC7WT126FU-F	MOS-IC		
IC725	TC7WH126FU-F	MOS-IC		
IC726	XC6221B332N-G	MOS-IC		
Q2	2SC5636	TRANSISTOR		
Q3	SSM3J05FU-F	FET		
Q4	2SK1824-A	FET		
Q5	MCH3914(7)-H	FET		
Q6	SSM3J15FS	FET		
Q7	MCH3914(7)-H	FET		
Q9	KRX102U	TRANSISTOR		
Q10	KTC4075E(Y,GR)	TRANSISTOR		
Q11	2SC5108(Y)F	TRANSISTOR		
Q12	2SC5108(Y)F	TRANSISTOR		
Q300	RD00HVS1-T113	FET		
Q500	KTC4080E-P	TRANSISTOR		
Q501	KTC4075E(Y,GR)	TRANSISTOR		
Q502	2SC2412K	TRANSISTOR		
Q503	3SK318	FET		
Q504	KTC4075E(Y,GR)	TRANSISTOR		
Q505	LTC014EEBFS8	TRANSISTOR		

⚠ Symbol No.	Part No.	Part Name	Description	Local
Q506	3SK318	FET		
Q700	2SK1824-A	FET		
Q701	2SC4919-S	TRANSISTOR		
Q702	LTC014TEBFS8	TRANSISTOR		
Q703	2SJ645	FET		
Q704	KTC4075E(Y,GR)	TRANSISTOR		
Q705	SSM3J05FU-F	FET		
Q706	LTC044TUBFS8	TRANSISTOR		
Q707	LTC014EEBFS8	TRANSISTOR		
Q708	LTC014EEBFS8	TRANSISTOR		
Q709	2SB1694	TRANSISTOR		
Q710	2SB1694	TRANSISTOR		
Q711	LTC014EEBFS8	TRANSISTOR		
Q712	KTC4075E(Y,GR)	TRANSISTOR		
Q713	LTC044EEBFS8	TRANSISTOR		
Q714	SSM3K05FU	FET		
Q715	SSM3K05FU	FET		
Q716	SSM3J05FU-F	FET		
Q717	SSM3J05FU-F	FET		
Q718	KTC4075E(Y,GR)	TRANSISTOR		
Q719	2SJ645	FET		
Q720	LTC014EEBFS8	TRANSISTOR		
Q721	SSM3J05FU-F	FET		
Q722	LTC014EEBFS8	TRANSISTOR		
Q723	LTC014EEBFS8	TRANSISTOR		
D6	1SV325F	VARIABLE CAPACITANCE DIODE		
D8	1SV325F	VARIABLE CAPACITANCE DIODE		
D9	1SV325F	VARIABLE CAPACITANCE DIODE		
D10	1SV325F	VARIABLE CAPACITANCE DIODE		
D11	1SV325F	VARIABLE CAPACITANCE DIODE		
D12	1SV325F	VARIABLE CAPACITANCE DIODE		
D13	1SV325F	VARIABLE CAPACITANCE DIODE		
D14	1SV325F	VARIABLE CAPACITANCE DIODE		
D15	1SV278F	VARIABLE CAPACITANCE DIODE		
D16	RN142S	DIODE		
D17	RN142S	DIODE		
D300	UDZW5.1(B)	ZENER DIODE		
D301	1SS355	DIODE		
D304	HSC277	DIODE		
D305	L407CDB	DIODE	(50V/1W)	
D306	L407CDB	DIODE	(50V/1W)	
D307	RB706F-40	DIODE		
D308	RB706F-40	DIODE		
D309	RKP351KW-1P2	DIODE		
D310	RKP351KW-1P2	DIODE		
D500	RB706F-40	DIODE		
D501	1SV305F	VARIABLE CAPACITANCE DIODE		
D502	1SV305F	VARIABLE CAPACITANCE DIODE		
D503	1SV305F	VARIABLE CAPACITANCE DIODE		
D504	1SV305F	VARIABLE CAPACITANCE DIODE		
D505	1SV305F	VARIABLE CAPACITANCE DIODE		
D700	DA221	DIODE		
D701	DA221	DIODE		
D702	DA221	DIODE		
D704	DA221	DIODE		
D705	DA221	DIODE		
D706	DA221	DIODE		
D707	DA221	DIODE		
D708	DA221	DIODE		
D709	DA221	DIODE		
D710	DA221	DIODE		
D711	DA221	DIODE		
D712	MC2858-T111	DIODE		
D713	1SS372F	DIODE		
D714	DB2S310	DIODE		
D715	DB2S310	DIODE		
D717	UDZW18(B)	ZENER DIODE		
D718	RB521S-30-TP	DIODE		
D719	Z5W27V	SURGE ABSORBER		
D720	DB2S310	DIODE		
D721	DB2S310	DIODE		
C7	CC73HCH1H101J	C CAPACITOR	100PF J	
C9	CK73HB1E103K	C CAPACITOR	0.010UF K	
C10	CC73HCH1H101J	C CAPACITOR	100PF J	
C12	CC73HCH1H101J	C CAPACITOR	100PF J	
C13	CC73HCH1H101J	C CAPACITOR	100PF J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C14	CK73HB1H271K	C CAPACITOR	270PF K	
C15	CK73HB1H103K	C CAPACITOR	0.010UF K	
C16	CK73HB1E103K	C CAPACITOR	0.010UF K	
C17	CC73HCH1H100B	C CAPACITOR	10PF B	
C18	CK73HB1A104K	C CAPACITOR	0.10UF K	
C19	CC73HCH1H101J	C CAPACITOR	100PF J	
C21	CK73HB1A473K	C CAPACITOR	0.047UF K	
C22	CK73HB1E103K	C CAPACITOR	0.010UF K	
C23	CC73HCH1H100B	C CAPACITOR	10PF B	
C24	CK73HB1E103K	C CAPACITOR	0.010UF K	
C25	CK73HB1E103K	C CAPACITOR	0.010UF K	
C26	CC73HCH1H101J	C CAPACITOR	100PF J	
C27	CC73HCH1H101J	C CAPACITOR	100PF J	
C28	CK73HB1A224K	C CAPACITOR	0.22UF K	
C29	CK73HB1A224K	C CAPACITOR	0.22UF K	
C31	CK73HB1H271K	C CAPACITOR	270PF K	
C32	CK73HB1E103K	C CAPACITOR	0.010UF K	
C34	CS77MA1D1R5M	TA E CAPACITOR	1.5UF 20WV	
C35	CK73HB1H271K	C CAPACITOR	270PF K	
C36	CS77MA1V0R1M	TA E CAPACITOR	0.1UF 35WV	
C38	CK73HB1H471K	C CAPACITOR	470PF K	
C46	CC73HCH1H101J	C CAPACITOR	100PF J	
C49	CC73HCH1H080B	C CAPACITOR	8.0PF B	
C50	CK73HB1H471K	C CAPACITOR	470PF K	
C51	CC73HCH1H030B	C CAPACITOR	3.0PF B	
C52	CC73HCH1H080B	C CAPACITOR	8.0PF B	
C53	CC73HCH1H330J	C CAPACITOR	33PF J	
C58	CC73HCH1H100B	C CAPACITOR	10PF B	
C60	CK73HB1H271K	C CAPACITOR	270PF K	
C61	CK73HB1H271K	C CAPACITOR	270PF K	
C63	C93-0787-05	C CAPACITOR	0.1UF J	
C64	CK73HB1A104K	C CAPACITOR	0.10UF K	
C65	CK73HB1H471K	C CAPACITOR	470PF K	
C67	CC73HCH1H470J	C CAPACITOR	47PF J	
C69	CC73HCH1H470J	C CAPACITOR	47PF J	
C70	CK73HB1H471K	C CAPACITOR	470PF K	
C73	CK73HB1H471K	C CAPACITOR	470PF K	
C74	CK73FB0J106K	C CAPACITOR	10UF K	
C75	CC73HCH1H100C	C CAPACITOR	10PF C	
C78	CC73HCH1H101J	C CAPACITOR	100PF J	
C79	CC73HCH1HR75B	C CAPACITOR	0.75PF B	
C80	CC73HCH1H200J	C CAPACITOR	20PF J	
C81	CC73HCH1H0R5B	C CAPACITOR	0.5PF B	
C82	CK73GB1H471K	C CAPACITOR	470PF K	
C83	CK73GB1H471K	C CAPACITOR	470PF K	
C84	CC73HCH1H101J	C CAPACITOR	100PF J	
C85	CC73HCH1H101J	C CAPACITOR	100PF J	
C86	CC73HCH1H3R5B	C CAPACITOR	3.5PF B	
C87	CK73GB1H471K	C CAPACITOR	470PF K	
C88	CC73HCH1H2R5B	C CAPACITOR	2.5PF B	
C89	CC73HCH1H060B	C CAPACITOR	6.0PF B	
C90	CK73GB1H471K	C CAPACITOR	470PF K	
C91	CC73HCH1H080B	C CAPACITOR	8.0PF B	
C92	CC73HCH1H040B	C CAPACITOR	4.0PF B	
C93	CC73HCH1H060B	C CAPACITOR	6.0PF B	
C94	CK73HB1H471K	C CAPACITOR	470PF K	
C95	CC73HCH1H0R3B	C CAPACITOR	0.3PF B	
C96	CC73HCH1H0R5B	C CAPACITOR	0.5PF B	
C97	CS77BB21C100M	TA E CAPACITOR	10UF 16WV	
C98	CK73HB1H471K	C CAPACITOR	470PF K	
C99	CK73HB1H471K	C CAPACITOR	470PF K	
C100	CK73HB1H471K	C CAPACITOR	470PF K	
C101	CC73HCH1H040B	C CAPACITOR	4.0PF B	
C102	CC73HCH1H020B	C CAPACITOR	2.0PF B	
C103	CC73GCH1H020B	C CAPACITOR	2.0PF B	
C104	CK73HB1H471K	C CAPACITOR	470PF K	
C105	CK73HB1H471K	C CAPACITOR	470PF K	
C106	CK73HB1H471K	C CAPACITOR	470PF K	
C108	CC73GCH1H020B	C CAPACITOR	2.0PF B	
C300	CK73HB1H471K	C CAPACITOR	470PF K	
C301	CC73GCH1H110J	C CAPACITOR	11PF J	
C302	CC73HCH1H060B	C CAPACITOR	6.0PF B	
C303	CC73HCH1H110J	C CAPACITOR	11PF J	
C304	CC73HCH1H240J	C CAPACITOR	24PF J	
C305	CK73HB1H102K	C CAPACITOR	1000PF K	
C306	CK73HB1H471K	C CAPACITOR	470PF K	
C309	CC73HCH1H110J	C CAPACITOR	11PF J	
C310	CK73HB1H471K	C CAPACITOR	470PF K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C311	CC73HCH1H1R5B	C CAPACITOR	1.5PF B	
C312	CK73HB1E223K	C CAPACITOR	0.022UF K	
C313	CC73GCH1H271J	C CAPACITOR	270PF J	
C315	CC73GCH1H101J	C CAPACITOR	100PF J	
C320	CK73HB1H471K	C CAPACITOR	470PF K	
C323	CK73GB1H221K	C CAPACITOR	220PF K	
C325	CC73GCH1H220J	C CAPACITOR	22PF J	
C326	CK73GB1H102K	C CAPACITOR	1000PF K	
C327	CC73GCH1H101J	C CAPACITOR	100PF J	
C328	CC73GCH1H101J	C CAPACITOR	100PF J	
C329	CK73HB1A154K	C CAPACITOR	0.15UF K	
C330	CK73GB1H471K	C CAPACITOR	470PF K	
C332	CC73GCH1H101J	C CAPACITOR	100PF J	
C333	CK73GB1H471K	C CAPACITOR	470PF K	
C334	CC73GCH1H470J	C CAPACITOR	47PF J	
C335	CC73GCH1H220J	C CAPACITOR	22PF J	
C336	C93-0553-05	C CAPACITOR	3.0PF C	
C339	CK73HB1A104K	C CAPACITOR	0.10UF K	
C340	CK73GB1H471K	C CAPACITOR	470PF K	
C343	CK73HB1H471K	C CAPACITOR	470PF K	
C344	CK73GB1H471K	C CAPACITOR	470PF K	
C346	CK73GB1H103K	C CAPACITOR	0.010UF K	
C347	CK73HB1H471K	C CAPACITOR	470PF K	
C348	CK73HB1H471K	C CAPACITOR	470PF K	
C349	CK73GB1H103K	C CAPACITOR	0.010UF K	
C350	CK73HB1H471K	C CAPACITOR	470PF K	
C351	CC73GCH1H3R5B	C CAPACITOR	3.5PF B	
C352	C93-0550-05	C CAPACITOR	1.0PF C	
C353	C93-0603-05	C CAPACITOR	1000PF K	
C354	C93-0603-05	C CAPACITOR	1000PF K	
C355	CC73GCH1H090B	C CAPACITOR	9.0PF B	
C356	CC73GCH1H150J	C CAPACITOR	15PF J	
C357	C93-0552-05	C CAPACITOR	2.0PF C	
C358	CK73GB1H102K	C CAPACITOR	1000PF K	
C359	C93-0550-05	C CAPACITOR	1.0PF C	
C360	CM73F2H040D	C CAPACITOR	4.0PF D	
C363	C93-0550-05	C CAPACITOR	1.0PF C	
C364	C93-0553-05	C CAPACITOR	3.0PF C	
C365	CK73GB1H102K	C CAPACITOR	1000PF K	
C366	CK73HB1H102K	C CAPACITOR	1000PF K	
C367	CK73HB1H471K	C CAPACITOR	470PF K	
C368	CK73HB1E103K	C CAPACITOR	0.010UF K	
C369	CK73HB1H471K	C CAPACITOR	470PF K	
C370	CC73HCH1H100D	C CAPACITOR	10PF D	
C371	CC73HCH1H030B	C CAPACITOR	3.0PF B	
C372	CC73HCH1H040B	C CAPACITOR	4.0PF B	
C374	CC73HCH1H040B	C CAPACITOR	4.0PF B	
C376	CC73HCH1H100C	C CAPACITOR	10PF C	
C500	CK73HB1H271K	C CAPACITOR	270PF K	
C502	CK73HB1A104K	C CAPACITOR	0.10UF K	
C503	CK73HB1H271K	C CAPACITOR	270PF K	
C504	CK73HB1A104K	C CAPACITOR	0.10UF K	
C505	CC73HCH1H560J	C CAPACITOR	56PF J	
C506	CK73HB1H152K	C CAPACITOR	1500PF K	
C507	CK73HB1A104K	C CAPACITOR	0.10UF K	
C508	CK73HB1H681K	C CAPACITOR	680PF K	
C509	CK73HB1H182K	C CAPACITOR	1800PF K	
C510	CC73HCH1H330J	C CAPACITOR	33PF J	
C511	CK73HB1E103K	C CAPACITOR	0.010UF K	
C512	CC73HCH1H220J	C CAPACITOR	22PF J	
C513	CC73HCH1H820J	C CAPACITOR	82PF J	
C514	CK73HB1E103K	C CAPACITOR	0.010UF K	
C515	CK73HB1A104K	C CAPACITOR	0.10UF K	
C516	CK73HB1H102K	C CAPACITOR	1000PF K	
C517	CC73HCH1H390J	C CAPACITOR	39PF J	
C518	CK73HB1A333K	C CAPACITOR	0.033UF K	
C519	CC73HCH1H820J	C CAPACITOR	82PF J	
C520	CK73GB0J106K	C CAPACITOR	10UF K	
C521	CK73HB1A104K	C CAPACITOR	0.10UF K	
C522	CK73HB1A224K	C CAPACITOR	0.22UF K	
C525	CK73HB1H271K	C CAPACITOR	270PF K	
C527	CK73HB1E103K	C CAPACITOR	0.010UF K	
C528	CC73HCH1H101J	C CAPACITOR	100PF J	
C529	CC73HCH1H101J	C CAPACITOR	100PF J	
C530	CK73HB1A224K	C CAPACITOR	0.22UF K	
C531	CK73GB0J106K	C CAPACITOR	10UF K	
C532	CK73HB1A104K	C CAPACITOR	0.10UF K	
C534	CK73HB0J225K	C CAPACITOR	2.2UF K	
C535	CK73HB0J225K	C CAPACITOR	2.2UF K	
C536	CK73GB1A105K	C CAPACITOR	1.0UF K	
C537	CK73HB1H471K	C CAPACITOR	470PF K	
C538	CK73HB1E103K	C CAPACITOR	0.010UF K	
C539	CK73HB1E103K	C CAPACITOR	0.010UF K	
C540	CK73HB0J225K	C CAPACITOR	2.2UF K	
C541	CC73HCH1H020B	C CAPACITOR	2.0PF B	
C542	CK73HB1A105K	C CAPACITOR	1.0UF K	
C543	CC73HCH1H100C	C CAPACITOR	10PF C	
C544	CK73HB1A224K	C CAPACITOR	0.22UF K	
C545	CC73HCH1H020B	C CAPACITOR	2.0PF B	
C546	CK73HB1A474K	C CAPACITOR	0.47UF K	
C547	CK73HB1H102K	C CAPACITOR	1000PF K	
C548	CK73HB1E103K	C CAPACITOR	0.010UF K	
C549	CK73HB1A104K	C CAPACITOR	0.10UF K	
C550	CK73HB1E103K	C CAPACITOR	0.010UF K	
C551	CK73HB1H471K	C CAPACITOR	470PF K	
C552	CC73HCH1H130J	C CAPACITOR	13PF J	
C553	CK73HB1E103K	C CAPACITOR	0.010UF K	
C555	CK73HB1H471K	C CAPACITOR	470PF K	
C556	CK73HB0J224K	C CAPACITOR	0.22UF K	
C557	CK73GB1H471K	C CAPACITOR	470PF K	
C558	CK73HB1H471K	C CAPACITOR	470PF K	
C559	CK73HB1E103K	C CAPACITOR	0.010UF K	
C560	CK73HB1H471K	C CAPACITOR	470PF K	
C561	CK73HB1H471K	C CAPACITOR	470PF K	
C562	CK73HB1H471K	C CAPACITOR	470PF K	
C564	CK73HB1H471K	C CAPACITOR	470PF K	
C565	CC73HCH1H150J	C CAPACITOR	15PF J	
C566	CC73HCH1H3R5B	C CAPACITOR	3.5PF B	
C567	CC73HCH1HR75B	C CAPACITOR	0.75PF B	
C568	CC73HCH1H010B	C CAPACITOR	1.0PF B	
C569	CC73HCH1H4R5B	C CAPACITOR	4.5PF B	
C570	CC73HCH1H150J	C CAPACITOR	15PF J	
C571	CC73HCH1H1R5B	C CAPACITOR	1.5PF B	
C572	CK73HB1H102K	C CAPACITOR	1000PF K	
C573	CC73HCH1H020B	C CAPACITOR	2.0PF B	
C574	CC73HCH1H150J	C CAPACITOR	15PF J	
C575	CC73HCH1H030B	C CAPACITOR	3.0PF B	
C576	CK73HB1H471K	C CAPACITOR	470PF K	
C577	CK73HB1H471K	C CAPACITOR	470PF K	
C579	CK73HB1A104K	C CAPACITOR	0.10UF K	
C580	CK73HB1H471K	C CAPACITOR	470PF K	
C582	CK73HB1H471K	C CAPACITOR	470PF K	
C583	CK73HB1H471K	C CAPACITOR	470PF K	
C584	CK73HB1H471K	C CAPACITOR	470PF K	
C585	CK73HB1H471K	C CAPACITOR	470PF K	
C586	CK73HB1H471K	C CAPACITOR	470PF K	
C587	CC73HCH1H020B	C CAPACITOR	2.0PF B	
C589	CC73HCH1H150J	C CAPACITOR	15PF J	
C590	CC73HCH1H030B	C CAPACITOR	3.0PF B	
C591	CK73HB1H102K	C CAPACITOR	1000PF K	
C592	CC73HCH1H3R5B	C CAPACITOR	3.5PF B	
C595	CC73HCH1H150J	C CAPACITOR	15PF J	
C596	CC73HCH1H050B	C CAPACITOR	5.0PF B	
C599	CC73HCH1H300J	C CAPACITOR	30PF J	
C601	CC73HCH1H040B	C CAPACITOR	4.0PF B	
C602	CC73HCH1H1R5B	C CAPACITOR	1.5PF B	
C700	CK73HB1H471K	C CAPACITOR	470PF K	
C701	CK73HB1H471K	C CAPACITOR	470PF K	
C702	CC73HCH1H101J	C CAPACITOR	100PF J	
C703	CK73HB1H103K	C CAPACITOR	0.010UF K	
C704	CK73HB1H471K	C CAPACITOR	470PF K	
C705	CC73HCH1H101J	C CAPACITOR	100PF J	
C706	CK73HB1H471K	C CAPACITOR	470PF K	
C707	CC73HCH1H101J	C CAPACITOR	100PF J	
C708	CK73HB1H471K	C CAPACITOR	470PF K	
C709	CK73HB1H471K	C CAPACITOR	470PF K	
C710	CK73HB1H103K	C CAPACITOR	0.010UF K	
C711	CC73HCH1H101J	C CAPACITOR	100PF J	
C712	CK73HB1H471K	C CAPACITOR	470PF K	
C713	CC73HCH1H101J	C CAPACITOR	100PF J	
C714	CK73HB1A104K	C CAPACITOR	0.10UF K	
C715	CK73HB1H471K	C CAPACITOR	470PF K	
C716	CK73HB1H471K	C CAPACITOR	470PF K	
C717	CC73HCH1H101J	C CAPACITOR	100PF J	
C718	CK73HB1H471K	C CAPACITOR	470PF K	
C719	CC73HCH1H101J	C CAPACITOR	100PF J	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C720	CK73HB1H471K	C CAPACITOR	470PF K	
C721	CK73HB1H471K	C CAPACITOR	470PF K	
C722	CC73HCH1H101J	C CAPACITOR	100PF J	
C723	CK73HB1H471K	C CAPACITOR	470PF K	
C725	CK73HB1H471K	C CAPACITOR	470PF K	
C727	CK73HB1H471K	C CAPACITOR	470PF K	
C729	CK73HB1H471K	C CAPACITOR	470PF K	
C731	CC73HCH1H101J	C CAPACITOR	100PF J	
C733	CC73HCH1H101J	C CAPACITOR	100PF J	
C735	CK73HB1H103K	C CAPACITOR	0.010UF K	
C736	CK73GB1A105K	C CAPACITOR	1.0UF K	
C737	CK73HB0J105K	C CAPACITOR	1.0UF K	
C738	CK73HB0J105K	C CAPACITOR	1.0UF K	
C740	CK73HB1H103K	C CAPACITOR	0.010UF K	
C741	CK73HB1H471K	C CAPACITOR	470PF K	
C742	CK73GB1C104K	C CAPACITOR	0.10UF K	
C743	CK73HB0J105K	C CAPACITOR	1.0UF K	
C744	CK73HB1A104K	C CAPACITOR	0.10UF K	
C745	CK73HB1H102K	C CAPACITOR	1000PF K	
C746	CK73HB1A104K	C CAPACITOR	0.10UF K	
C747	CK73HB1A105K	C CAPACITOR	1.0UF K	
C748	CK73HB1A105K	C CAPACITOR	1.0UF K	
C749	CK73HB1A105K	C CAPACITOR	1.0UF K	
C750	CK73HB1A105K	C CAPACITOR	1.0UF K	
C751	CK73FB0J106K	C CAPACITOR	10UF K	
C752	CC73HCH1H101J	C CAPACITOR	100PF J	
C753	CC73HCH1H680J	C CAPACITOR	68PF J	
C754	CK73HB0J105K	C CAPACITOR	1.0UF K	
C755	CK73HB0J105K	C CAPACITOR	1.0UF K	
C757	CK73HB1H103K	C CAPACITOR	0.010UF K	
C758	CK73HB1A104K	C CAPACITOR	0.10UF K	
C759	CK73HB1A104K	C CAPACITOR	0.10UF K	
C760	CK73HB0J105K	C CAPACITOR	1.0UF K	
C761	CK73GB0J475K	C CAPACITOR	4.7UF K	
C764	CK73HB1C333K	C CAPACITOR	0.033UF K	
C765	CC73HCH1H101J	C CAPACITOR	100PF J	
C766	CC73HCH1H101J	C CAPACITOR	100PF J	
C767	CC73HCH1H101J	C CAPACITOR	100PF J	
C768	CC73HCH1H101J	C CAPACITOR	100PF J	
C769	CC73HCH1H101J	C CAPACITOR	100PF J	
C770	CC73HCH1H101J	C CAPACITOR	100PF J	
C771	CC73HCH1H101J	C CAPACITOR	100PF J	
C772	CC73HCH1H101J	C CAPACITOR	100PF J	
C773	CC73HCH1H101J	C CAPACITOR	100PF J	
C774	CK73HB1E223K	C CAPACITOR	0.022UF K	
C775	CC73HCH1H101J	C CAPACITOR	100PF J	
C780	CK73HB0J105K	C CAPACITOR	1.0UF K	
C781	CK73HB1A104K	C CAPACITOR	0.10UF K	
C783	CK73HB1A104K	C CAPACITOR	0.10UF K	
C784	CK73GB0J106K	C CAPACITOR	10UF K	
C786	CK73HB1A104K	C CAPACITOR	0.10UF K	
C789	CK73HB0J105K	C CAPACITOR	1.0UF K	
C790	CK73HB1H471K	C CAPACITOR	470PF K	
C793	CK73HB0J105K	C CAPACITOR	1.0UF K	
C794	CK73HB1A104K	C CAPACITOR	0.10UF K	
C796	CK73GB0J106K	C CAPACITOR	10UF K	
C798	CK73HB0J105K	C CAPACITOR	1.0UF K	
C800	CK73GB1C104K	C CAPACITOR	0.10UF K	
C801	CK73GB1H471K	C CAPACITOR	470PF K	
C802	CK73FB0J106K	C CAPACITOR	10UF K	
C803	CC73HCH1H101J	C CAPACITOR	100PF J	
C806	CK73HB0J475M	C CAPACITOR	4.7UF M	
C807	CC73HCH1H101J	C CAPACITOR	100PF J	
C809	CK73HB1H271K	C CAPACITOR	270PF K	
C810	CK73FB0J106K	C CAPACITOR	10UF K	
C815	CK73HB1E103K	C CAPACITOR	0.010UF K	
C816	CK73GB1A105K	C CAPACITOR	1.0UF K	
C817	CK73GB0J106K	C CAPACITOR	10UF K	
C818	CK73HB1H102K	C CAPACITOR	1000PF K	
C820	CK73HB1H103K	C CAPACITOR	0.010UF K	
C829	CK73HB1A683K	C CAPACITOR	0.068UF K	
C831	CK73HB1H103K	C CAPACITOR	0.010UF K	
C832	CK73HB1E103K	C CAPACITOR	0.010UF K	
C833	CK73HB1A104K	C CAPACITOR	0.10UF K	
C835	CK73GB1H104K	C CAPACITOR	0.10UF K	
C837	CK73HB1E103K	C CAPACITOR	0.010UF K	
C841	CK73HB1A104K	C CAPACITOR	0.10UF K	
C842	CK73HB1A104K	C CAPACITOR	0.10UF K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C843	CK73HB1A104K	C CAPACITOR	0.10UF K	
C844	CK73HB1H102K	C CAPACITOR	1000PF K	
C845	CK73HB1A104K	C CAPACITOR	0.10UF K	
C846	CK73HB1H102K	C CAPACITOR	1000PF K	
C847	CK73HB1A104K	C CAPACITOR	0.10UF K	
C848	CK73HB1H102K	C CAPACITOR	1000PF K	
C849	CK73GB1H102K	C CAPACITOR	1000PF K	
C850	CK73HB1H102K	C CAPACITOR	1000PF K	
C851	CK73HB0J225K	C CAPACITOR	2.2UF K	
C853	CK73HB1H103K	C CAPACITOR	0.010UF K	
C856	CK73HB0J105K	C CAPACITOR	1.0UF K	
C857	CK73HB1H103K	C CAPACITOR	0.010UF K	
C858	CK73HB0J105K	C CAPACITOR	1.0UF K	
C859	CK73HB1H471K	C CAPACITOR	470PF K	
C860	CK73GB1H102K	C CAPACITOR	1000PF K	
C861	CK73HB1A104K	C CAPACITOR	0.10UF K	
C862	CK73HB1H102K	C CAPACITOR	1000PF K	
C863	CK73HB1H102K	C CAPACITOR	1000PF K	
C865	CK73HB1H102K	C CAPACITOR	1000PF K	
C867	CK73HB1A104K	C CAPACITOR	0.10UF K	
C868	CK73HB1A104K	C CAPACITOR	0.10UF K	
C869	CK73HB1H102K	C CAPACITOR	1000PF K	
C870	CK73HB1A104K	C CAPACITOR	0.10UF K	
C871	CK73HB1A104K	C CAPACITOR	0.10UF K	
C872	CK73HB0J105K	C CAPACITOR	1.0UF K	
C874	CK73HB1A104K	C CAPACITOR	0.10UF K	
C875	CK73HB1H682K	C CAPACITOR	6800PF K	
C876	CC73HCH1H101J	C CAPACITOR	100PF J	
C878	CK73HB0J225K	C CAPACITOR	2.2UF K	
C879	CK73HB1A104K	C CAPACITOR	0.10UF K	
C880	CK73HB1H102K	C CAPACITOR	1000PF K	
C881	CK73HB1A104K	C CAPACITOR	0.10UF K	
C882	CK73HB1A104K	C CAPACITOR	0.10UF K	
C883	CK73HB1A104K	C CAPACITOR	0.10UF K	
C884	CK73HB1H102K	C CAPACITOR	1000PF K	
C885	CK73HB1H102K	C CAPACITOR	1000PF K	
C886	CK73HB1H102K	C CAPACITOR	1000PF K	
C887	CK73HB1H102K	C CAPACITOR	1000PF K	
C890	CK73HB1A104K	C CAPACITOR	0.10UF K	
C891	CS77BB21C220M	TA E CAPACITOR	22UF 16WV	
C892	CK73HB1E103K	C CAPACITOR	0.010UF K	
C894	CK73HB1H102K	C CAPACITOR	1000PF K	
C897	CK73HB1H102K	C CAPACITOR	1000PF K	
C898	CK73GB1A105K	C CAPACITOR	1.0UF K	
C899	CK73HB0J105K	C CAPACITOR	1.0UF K	
C900	CK73GB1A105K	C CAPACITOR	1.0UF K	
C902	CK73HB0J105K	C CAPACITOR	1.0UF K	
C903	CS77BB21C220M	TA E CAPACITOR	22UF 16WV	
C904	CK73HB1H102K	C CAPACITOR	1000PF K	
C905	CK73HB1A104K	C CAPACITOR	0.10UF K	
C908	CK73HB1A104K	C CAPACITOR	0.10UF K	
C909	CK73HB1A104K	C CAPACITOR	0.10UF K	
C911	CK73HB1A224K	C CAPACITOR	0.22UF K	
C912	CK73HB1A104K	C CAPACITOR	0.10UF K	
C913	CK73GB1C224K	C CAPACITOR	0.22UF K	
C914	CE32BM1C471M	E CAPACITOR	470UF 16WV	
C916	CK73HB1H102K	C CAPACITOR	1000PF K	
C919	CK73GB1H102K	C CAPACITOR	1000PF K	
C920	CK73HB0J105K	C CAPACITOR	1.0UF K	
C921	CK73HB1H102K	C CAPACITOR	1000PF K	
C922	CK73HB1H102K	C CAPACITOR	1000PF K	
C923	CK73HB1A105K	C CAPACITOR	1.0UF K	
C924	CK73GB1A105K	C CAPACITOR	1.0UF K	
C925	CS77BA1C4R7M	TA E CAPACITOR	4.7UF 16WV	
C926	CK73GB1H102K	C CAPACITOR	1000PF K	
C927	CS77BA1A100M	TA E CAPACITOR	10UF 10WV	
C928	CE32CL1C470M	E CAPACITOR	47UF 16WV	
C929	CS77MB20J101M	TA E CAPACITOR	100UF 6.3WV	
C930	CK73HB1H102K	C CAPACITOR	1000PF K	
C931	CK73HB1E103K	C CAPACITOR	0.010UF K	
C933	CE32BD1C471M	E CAPACITOR	470UF 16WV	
C934	CK73GB1H102K	C CAPACITOR	1000PF K	
C935	CK73HB1H102K	C CAPACITOR	1000PF K	
C936	CE32BD1C471M	E CAPACITOR	470UF 16WV	
C937	CK73GB1H102K	C CAPACITOR	1000PF K	
C938	CK73GB1A105K	C CAPACITOR	1.0UF K	
C939	CK73HB1E103K	C CAPACITOR	0.010UF K	
C940	CK73HB1H102K	C CAPACITOR	1000PF K	

⚠ Symbol No.	Part No.	Part Name	Description	Local
C941	CK73EB1E106K	C CAPACITOR	10UF K	
C942	CK73HB1H102K	C CAPACITOR	1000PF K	
C944	CK73FB1E225K	C CAPACITOR	2.2UF K	
C945	CK73HB1A104K	C CAPACITOR	0.10UF K	
C947	CC73HCH1H220J	C CAPACITOR	22PF J	
C948	CK73HB1A393K	C CAPACITOR	0.039UF K	
C949	CK73GB1H102K	C CAPACITOR	1000PF K	
C950	CC73HCH1H470J	C CAPACITOR	47PF J	
C951	CK73GB1H221K	C CAPACITOR	220PF K	
C952	CC73HCH1H101J	C CAPACITOR	100PF J	
C954	CK73GB1H471K	C CAPACITOR	470PF K	
C955	CK73HB1H471K	C CAPACITOR	470PF K	
C956	CC73HCH1H220J	C CAPACITOR	22PF J	
C957	CC73GCH1H220J	C CAPACITOR	22PF J	
C958	CK73HB1H471K	C CAPACITOR	470PF K	
C959	CK73GB1H471K	C CAPACITOR	470PF K	
C960	CC73GCH1H470J	C CAPACITOR	47PF J	
C961	CK73HB1E103K	C CAPACITOR	0.010UF K	
C962	CC73HCH1H220J	C CAPACITOR	22PF J	
C963	CK73GB1H471K	C CAPACITOR	470PF K	
C965	CK73HB1H471K	C CAPACITOR	470PF K	
C966	CC73GCH1H101J	C CAPACITOR	100PF J	
C967	CK73GB1H102K	C CAPACITOR	1000PF K	
C968	CC73GCH1H470J	C CAPACITOR	47PF J	
C969	CK73GB1H471K	C CAPACITOR	470PF K	
C970	CK73GB1H471K	C CAPACITOR	470PF K	
C971	CK73GB1H221K	C CAPACITOR	220PF K	
C973	CK73HB1A104K	C CAPACITOR	0.10UF K	
C974	CK73HB1A104K	C CAPACITOR	0.10UF K	
C976	CK73HB0J105K	C CAPACITOR	1.0UF K	
C977	CK73HB0J105K	C CAPACITOR	1.0UF K	
C978	CC73HCH1H560J	C CAPACITOR	56PF J	
C979	CK73HB1A104K	C CAPACITOR	0.10UF K	
C980	CK73GB1A105K	C CAPACITOR	1.0UF K	
C981	CK73HB1H102K	C CAPACITOR	1000PF K	
C982	CK73GB1A105K	C CAPACITOR	1.0UF K	
C983	CK73HB1H102K	C CAPACITOR	1000PF K	
C987	CK73HB1H102K	C CAPACITOR	1000PF K	
C988	CS77BB21A470M	TA E CAPACITOR	47UF 10WV	
C989	CS77BB21A470M	TA E CAPACITOR	47UF 10WV	
C990	CK73HB1E103K	C CAPACITOR	0.010UF K	
C991	CK73HB1H102K	C CAPACITOR	1000PF K	
C992	CC73HCH1H221J	C CAPACITOR	220PF J	
C993	CK73HB1H471K	C CAPACITOR	470PF K	
R2	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R4	RK73HB1J334J	MG RESISTOR	330K J 1/16W	
R6	RK73HB1J184J	MG RESISTOR	180K J 1/16W	
R7	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R8	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R9	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R10	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R11	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R13	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R14	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R15	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R16	RK73HB1J394J	MG RESISTOR	390K J 1/16W	
R17	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R19	RK73HB1J122J	MG RESISTOR	1.2K J 1/16W	
R20	RK73HB1J273J	MG RESISTOR	27K J 1/16W	
R21	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R22	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R23	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R24	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R25	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R26	RK73HB1J152J	MG RESISTOR	1.5K J 1/16W	
R27	RK73HB1J183J	MG RESISTOR	18K J 1/16W	
R28	RK73HB1J391J	MG RESISTOR	390 J 1/16W	
R31	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R33	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R35	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R40	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R42	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R45	RK73HB1J153J	MG RESISTOR	15K J 1/16W	
R47	RK73HB1J225J	MG RESISTOR	2.2M J 1/16W	
R48	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R50	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R51	RK73HB1J154J	MG RESISTOR	150K J 1/16W	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R52	RK73FB2B102J	MG RESISTOR	1.0K J 1/8W	
R53	RK73HB1J220J	MG RESISTOR	22 J 1/16W	
R54	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R55	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R57	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R58	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R59	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R60	RK73HB1J393J	MG RESISTOR	39K J 1/16W	
R61	RK73HB1J393J	MG RESISTOR	39K J 1/16W	
R62	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R63	RN73HH1J561D	MG RESISTOR	560 D 1/16W	
R64	RN73HH1J391D	MG RESISTOR	390 D 1/16W	
R65	RK73GB2A104J	MG RESISTOR	100K J 1/10W	
R66	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R67	RN73HH1J680D	MG RESISTOR	68 D 1/16W	
R68	RN73HH1J101D	MG RESISTOR	100 D 1/16W	
R69	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R70	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R71	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R72	RK73HB1J124J	MG RESISTOR	120K J 1/16W	
R73	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R74	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R76	RK73HB1J683J	MG RESISTOR	68K J 1/16W	
R77	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R78	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R79	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R80	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R81	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R300	RK73GB2A472J	MG RESISTOR	4.7K J 1/10W	
R301	RK73HB1J273J	MG RESISTOR	27K J 1/16W	
R302	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R303	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R310	RK73GB2A220J	MG RESISTOR	22 J 1/10W	
R311	RK73GB2A220J	MG RESISTOR	22 J 1/10W	
R312	RK73GB2A470J	MG RESISTOR	47 J 1/10W	
R314	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R316	RK73GB2A470J	MG RESISTOR	47 J 1/10W	
R317	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R318	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R320	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R321	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R322	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R324	RK73HB1J333J	MG RESISTOR	33K J 1/16W	
R325	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R327	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R329	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R330	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R331	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R332	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R334	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R335	RK73GH2A560D	MG RESISTOR	56 D 1/10W	
R337	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R338	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R340	RK73GH2A820D	MG RESISTOR	82 D 1/10W	
R341	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R342	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R343	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R344	RK73GH2A201D	MG RESISTOR	200 D 1/10W	
R345	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R346	RK73RB2H101J	MG RESISTOR	100 J 1/2W	
R348	RK73GB2A102J	MG RESISTOR	1.0K J 1/10W	
R350	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R351	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R352	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R353	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R354	RK73GH2A121D	MG RESISTOR	120 D 1/10W	
R355	RK73GH2A181D	MG RESISTOR	180 D 1/10W	
R356	R92-1061-05	JUMPER REST	0 OHM	
R357	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R358	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R359	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R360	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R362	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R500	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R501	RK73GB2A104J	MG RESISTOR	100K J 1/10W	
R503	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R504	RK73HB1J564J	MG RESISTOR	560K J 1/16W	
R508	RK73HB1J152J	MG RESISTOR	1.5K J 1/16W	

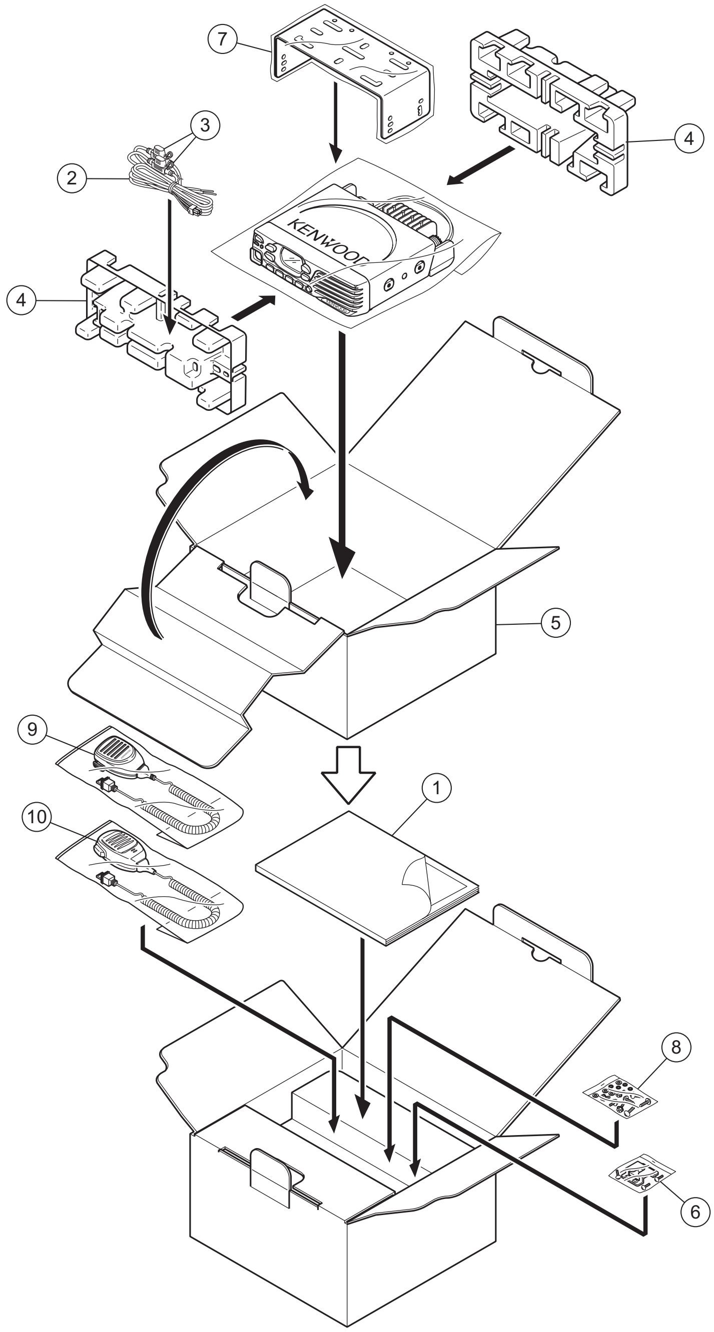
⚠ Symbol No.	Part No.	Part Name	Description	Local
R509	RK73HB1J123J	MG RESISTOR	12K J 1/16W	
R510	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R512	RK73HB1J123J	MG RESISTOR	12K J 1/16W	
R513	RK73HB1J334J	MG RESISTOR	330K J 1/16W	
R514	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R515	RK73HB1J332J	MG RESISTOR	3.3K J 1/16W	
R516	RK73HB1J332J	MG RESISTOR	3.3K J 1/16W	
R517	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R518	RK73HB1J563J	MG RESISTOR	56K J 1/16W	
R519	RK73HH1J473D	MG RESISTOR	47K D 1/16W	
R520	RK73HB1J105J	MG RESISTOR	1.0M J 1/16W	
R521	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R523	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R524	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R525	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R526	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R527	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R528	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R529	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R530	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R532	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R535	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R536	RK73HB1J394J	MG RESISTOR	390K J 1/16W	
R538	RK73HB1J121J	MG RESISTOR	120 J 1/16W	
R540	RK73HB1J183J	MG RESISTOR	18K J 1/16W	
R541	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R542	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R543	RK73HB1J682J	MG RESISTOR	6.8K J 1/16W	
R544	RK73HB1J470J	MG RESISTOR	47 J 1/16W	
R545	RK73HB1J152J	MG RESISTOR	1.5K J 1/16W	
R546	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R547	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R548	RK73HB1J274J	MG RESISTOR	270K J 1/16W	
R550	RK73HB1J391J	MG RESISTOR	390 J 1/16W	
R551	RK73HB1J684J	MG RESISTOR	680K J 1/16W	
R552	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R553	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R554	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R555	RK73HB1J154J	MG RESISTOR	150K J 1/16W	
R556	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R557	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R558	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R560	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R561	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R562	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R563	RK73HB1J105J	MG RESISTOR	1.0M J 1/16W	
R566	RK73HB1J105J	MG RESISTOR	1.0M J 1/16W	
R567	RK73HB1J105J	MG RESISTOR	1.0M J 1/16W	
R568	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R570	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R571	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R572	RK73HB1J151J	MG RESISTOR	150 J 1/16W	
R573	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R574	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R575	RK73HB1J564J	MG RESISTOR	560K J 1/16W	
R576	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R577	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R578	RK73HB1J683J	MG RESISTOR	68K J 1/16W	
R579	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R580	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R581	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R582	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R583	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R585	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R586	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R588	RK73FB2B000J	MG RESISTOR	0.0 J 1/8W	
R592	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R652	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R653	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	M
R656	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R657	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R658	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R660	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R661	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R700	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R701	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R702	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R703	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R704	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R705	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R706	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R707	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R708	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R709	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R710	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R711	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R712	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R713	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R714	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R715	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R716	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R717	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R718	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R720	RK73HB1J682J	MG RESISTOR	6.8K J 1/16W	
R721	RK73HB1J682J	MG RESISTOR	6.8K J 1/16W	
R722	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R724	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R727	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R728	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R729	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R730	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R732	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R733	RK73HB1J561J	MG RESISTOR	560 J 1/16W	
R734	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R736	RK73HB1J681J	MG RESISTOR	680 J 1/16W	
R737	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R738	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R739	RK73HB1J821J	MG RESISTOR	820 J 1/16W	
R740	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R741	RK73HB1J221J	MG RESISTOR	220 J 1/16W	
R742	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R743	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R744	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R745	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R747	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R748	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R749	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R750	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R751	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R752	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R755	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R757	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R758	RK73HB1J334J	MG RESISTOR	330K J 1/16W	
R759	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R760	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R761	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R762	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R764	RK73HB1J183J	MG RESISTOR	18K J 1/16W	
R765	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R768	RK73HB1J561J	MG RESISTOR	560 J 1/16W	
R769	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R770	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R771	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R772	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R773	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R774	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R775	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R776	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R777	RK73GB2A124J	MG RESISTOR	120K J 1/10W	
R778	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R779	RK73HH1J473D	MG RESISTOR	47K D 1/16W	
R780	RK73HH1J473D	MG RESISTOR	47K D 1/16W	
R781	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R782	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R783	RK73HB1J683J	MG RESISTOR	68K J 1/16W	
R784	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R785	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R786	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R789	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R792	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R796	RK73HB1J333J	MG RESISTOR	33K J 1/16W	
R797	RK73HB1J562J	MG RESISTOR	5.6K J 1/16W	
R798	RK73HB1J392J	MG RESISTOR	3.9K J 1/16W	
R799	RK73HB1J393J	MG RESISTOR	39K J 1/16W	
R800	RK73HB1J333J	MG RESISTOR	33K J 1/16W	
R802	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R804	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R805	RK73GB2A104J	MG RESISTOR	100K J 1/10W	
R807	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R809	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R811	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R812	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R813	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R815	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R816	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R819	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R820	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R821	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R822	RK73HB1J393J	MG RESISTOR	39K J 1/16W	
R823	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R824	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R825	RK73GB2A100J	MG RESISTOR	10 J 1/10W	
R826	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R827	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R828	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R829	RK73HB1J123J	MG RESISTOR	12K J 1/16W	
R830	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R832	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R833	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R835	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R836	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R837	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R840	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R843	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R846	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R848	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R849	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R850	RK73HH1J124D	MG RESISTOR	120K D 1/16W	
R854	RK73HH1J224D	MG RESISTOR	220K D 1/16W	
R855	RK73HB1J820J	MG RESISTOR	82 J 1/16W	
R857	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R858	RK73HB1J682J	MG RESISTOR	6.8K J 1/16W	
R859	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R861	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R863	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R864	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R865	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R866	RK73HH1J334D	MG RESISTOR	330K D 1/16W	
R867	RK73HH1J154D	MG RESISTOR	150K D 1/16W	
R868	RK73HB1J332J	MG RESISTOR	3.3K J 1/16W	
R870	RK73HB1J220J	MG RESISTOR	22 J 1/16W	
R871	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R872	RK73HB1J820J	MG RESISTOR	82 J 1/16W	
R873	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R875	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R876	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R877	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R878	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R879	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R880	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R881	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R882	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R883	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R884	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R885	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R886	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R888	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R889	RK73HB1J123J	MG RESISTOR	12K J 1/16W	
R890	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R891	RK73HB1J105J	MG RESISTOR	1.0M J 1/16W	
R892	RK73HB1J153J	MG RESISTOR	15K J 1/16W	
R893	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R895	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R896	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R897	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R898	RK73GH2A134D	MG RESISTOR	130K D 1/10W	
R899	RK73GH2A123D	MG RESISTOR	12K D 1/10W	
R900	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R901	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R902	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R903	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R904	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R905	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R906	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R907	RK73HB1J100J	MG RESISTOR	10 J 1/16W	
R908	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R909	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R910	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R911	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R912	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R913	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R914	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R916	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R917	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R918	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R919	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R920	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R921	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R922	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R923	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R924	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R925	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R926	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R927	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R928	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R929	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R930	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R931	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R933	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R934	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R936	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R938	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R939	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R940	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R942	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R943	RK73HB1J152J	MG RESISTOR	1.5K J 1/16W	
R944	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R946	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R947	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R948	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R949	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R950	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R951	RK73HB1J224J	MG RESISTOR	220K J 1/16W	
R952	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R953	RK73HB1J823J	MG RESISTOR	82K J 1/16W	
R954	RK73HB1J471J	MG RESISTOR	470 J 1/16W	
R955	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R956	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R958	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R959	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R960	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R961	RK73GB2A221J	MG RESISTOR	220 J 1/10W	
R962	RK73HB1J391J	MG RESISTOR	390 J 1/16W	
R964	RK73FB2B000J	MG RESISTOR	0.0 J 1/8W	
R965	RK73GB2A473J	MG RESISTOR	47K J 1/10W	
R966	RK73FB2B000J	MG RESISTOR	0.0 J 1/8W	
R968	RK73GB2A334J	MG RESISTOR	330K J 1/10W	
R969	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R970	RK73HB1J564J	MG RESISTOR	560K J 1/16W	
R971	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R972	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R973	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R974	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R975	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R976	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R977	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R978	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R979	RK73HB1J223J	MG RESISTOR	22K J 1/16W	
R981	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	HK,HUK
R984	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R985	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R986	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R987	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R988	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R989	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R990	RK73HB1J474J	MG RESISTOR	470K J 1/16W	
R991	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R992	RK73HB1J472J	MG RESISTOR	4.7K J 1/16W	
R993	RK73HB1J104J	MG RESISTOR	100K J 1/16W	
R994	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	HK,HUK
R996	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R997	RK73HB1J101J	MG RESISTOR	100 J 1/16W	

⚠ Symbol No.	Part No.	Part Name	Description	Local
R998	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R999	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
L1	L41-4795-39	SMALL FIXED INDUCTOR	(4.7U)	
L2	L92-0442-05	CHIP FERRITE		
L4	L92-0443-05	CHIP FERRITE		
L7	L40-6865-71	SMALL FIXED INDUCTOR	(6.8NH)	
L8	L40-2275-71	SMALL FIXED INDUCTOR	(22NH)	
L10	L40-2785-92	SMALL FIXED INDUCTOR	(270NH)	
L12	L40-2785-92	SMALL FIXED INDUCTOR	(270NH)	
L15	L92-0163-05	BEADS CORE		
L16	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L18	L92-0163-05	BEADS CORE		
L21	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L22	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L23	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L24	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L27	L40-2285-92	SMALL FIXED INDUCTOR	(220NH)	
L28	L92-0443-05	CHIP FERRITE		
L30	L41-2278-14	SMALL FIXED INDUCTOR	(22NH)	
L31	L41-2278-14	SMALL FIXED INDUCTOR	(22NH)	
L33	L40-2702-86	SMALL FIXED INDUCTOR	(27UH)	
L34	L40-2785-92	SMALL FIXED INDUCTOR	(270NH)	
L36	L40-2785-92	SMALL FIXED INDUCTOR	(270NH)	
L37	L40-2702-86	SMALL FIXED INDUCTOR	(27UH)	
L39	L92-0443-05	CHIP FERRITE		
L40	L40-3375-71	SMALL FIXED INDUCTOR	(33NH)	
L41	L40-3375-71	SMALL FIXED INDUCTOR	(33NH)	
L300	L40-8265-71	SMALL FIXED INDUCTOR	(8.2NH)	
L301	L40-4763-71	SMALL FIXED INDUCTOR	(4.7NH)	
L302	L40-1075-92	SMALL FIXED INDUCTOR	(10NH)	
L303	L40-1575-92	SMALL FIXED INDUCTOR	(15NH)	
L304	L40-1275-92	SMALL FIXED INDUCTOR	(12NH)	
L305	L40-1275-92	SMALL FIXED INDUCTOR	(12NH)	
L307	L92-0179-05	CHIP FERRITE		
L308	L92-0179-05	CHIP FERRITE		
L309	L92-0179-05	CHIP FERRITE		
L310	L34-1039-05	AIR-CORE COIL		
L311	L34-4902-05	AIR-CORE COIL		
L312	L34-1039-05	AIR-CORE COIL		
L313	L34-1113-05	AIR-CORE COIL		
L314	L34-1113-05	AIR-CORE COIL		
L315	L34-4902-05	AIR-CORE COIL		
L316	L40-1875-71	SMALL FIXED INDUCTOR	(18NH)	
L318	L40-1875-71	SMALL FIXED INDUCTOR	(18NH)	
L500	L41-1885-53	SMALL FIXED INDUCTOR	(0.18UH)	
L501	L40-1085-71	SMALL FIXED INDUCTOR	(100NH)	
L502	L40-1591-86	SMALL FIXED INDUCTOR	(1.5UH)	
L503	L41-2785-39	SMALL FIXED INDUCTOR	(0.27U)	
L504	L41-6885-39	SMALL FIXED INDUCTOR	(0.68U)	
L506	L41-6868-14	SMALL FIXED INDUCTOR	(6.8NH)	
L507	L41-6868-14	SMALL FIXED INDUCTOR	(6.8NH)	
L508	L41-6868-14	SMALL FIXED INDUCTOR	(6.8NH)	
L509	L41-2788-45	SMALL FIXED INDUCTOR	(270NH)	
L510	L40-2775-92	SMALL FIXED INDUCTOR	(27NH)	
L512	L41-6868-14	SMALL FIXED INDUCTOR	(6.8NH)	
L513	L41-6868-14	SMALL FIXED INDUCTOR	(6.8NH)	
L514	L40-1875-92	SMALL FIXED INDUCTOR	(18NH)	
L516	L40-1875-92	SMALL FIXED INDUCTOR	(18NH)	
L517	L41-8275-45	SMALL FIXED INDUCTOR	(82NH)	
L700	L92-0163-05	BEADS CORE		
L701	L92-0163-05	BEADS CORE		
L702	L92-0163-05	BEADS CORE		
L703	L92-0163-05	BEADS CORE		
L704	L92-0163-05	BEADS CORE		
L705	L92-0443-05	CHIP FERRITE		
L706	L92-0163-05	BEADS CORE		
L707	L92-0163-05	BEADS CORE		
L710	L92-0161-05	BEADS CORE		
CN700	E40-6847-05	FLAT CABLE CONNECTOR		
CP1	RK75HA1J101J	CHIP-COM	100 J 1/16W	
CP701	RK74HA1J104J	CHIP-COM	100K J 1/16W	
CP702	RK74HB1J104J	CHIP-COM	100K J 1/16W	
CP703	RK74HA1J104J	CHIP-COM	100K J 1/16W	
CP704	RK75HA1J473J	CHIP-COM	47K J 1/16W	
CP705	RK74HA1J102J	CHIP-COM	1.0K J 1/16W	
CP706	RK75HA1J473J	CHIP-COM	47K J 1/16W	
CP707	RK75HA1J102J	CHIP-COM	1.0K J 1/16W	
CP708	RK74HA1J102J	CHIP-COM	1.0K J 1/16W	
F700	F53-0324-15	FUSE	(2.5A)	
F701	F53-0327-15	FUSE	(4A)	
F702	F53-0324-15	FUSE	(2.5A)	
F703	F53-0317-15	FUSE	(500MA)	
F704	F53-0317-15	FUSE	(500MA)	
J700	E58-0567-05	SUB SOCKET(D)		
J701	E1B-0001-00	3.5D PHONE JACK		
TH301	B57331V2104J	THERMISTOR		
TH302	B57331V2104J	THERMISTOR		
TH303	B57331V2104J	THERMISTOR		
TH502	NCP18WM474J0S	THERMISTOR		
X1	L77-3128-05	TCXO	(16.8MHZ)	
X700	L77-3129-05	TCXO	(19.2MHZ)	
XF500	L71-0684-05	MCF	(49.95MHZ)	

Packing materials and accessories parts list

Block No.M2MM



Packing and accessories

Block No. [M][2][M][M]

⚠ Symbol No.	Part No.	Part Name	Description	Local
1	B5A-0031-10	INSTRUCTION MANUAL		HK,HUK
1	B5A-0030-10	INSTRUCTION MANUAL		M
2	E30-7523-55	DC CORD ASSY ACCESSORY		
3	F52-0024-05	FUSE(BLADE TYPE)15A ACCESSORY	(x2)	HK,HUK
3	F52-0023-05	FUSE(BLADE TYPE)10A ACCESSORY	(x2)	M
4	H12-3178-05	PACKING FIXTURE	(x2)	
5	H52-2674-02	ITEM CARTON CASE		
6	J19-1584-15	HOLDER(MIC HANGER)		HK,HUK
7	J29-0726-03	BRACKET ACCESSORY		
8	N99-2039-05	SCREW SET		
9	T91-0624-65	MICROPHONE(KMC-30) ACCESSORY		HK
10	T91-0639-65	MICROPHONE(KMC-35) ACCESSORY		HUK

MEMO

JVC KENWOOD Corporation
Communications Equipment Div

(No.RA011<Rev.001>)

Printed in Japan
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